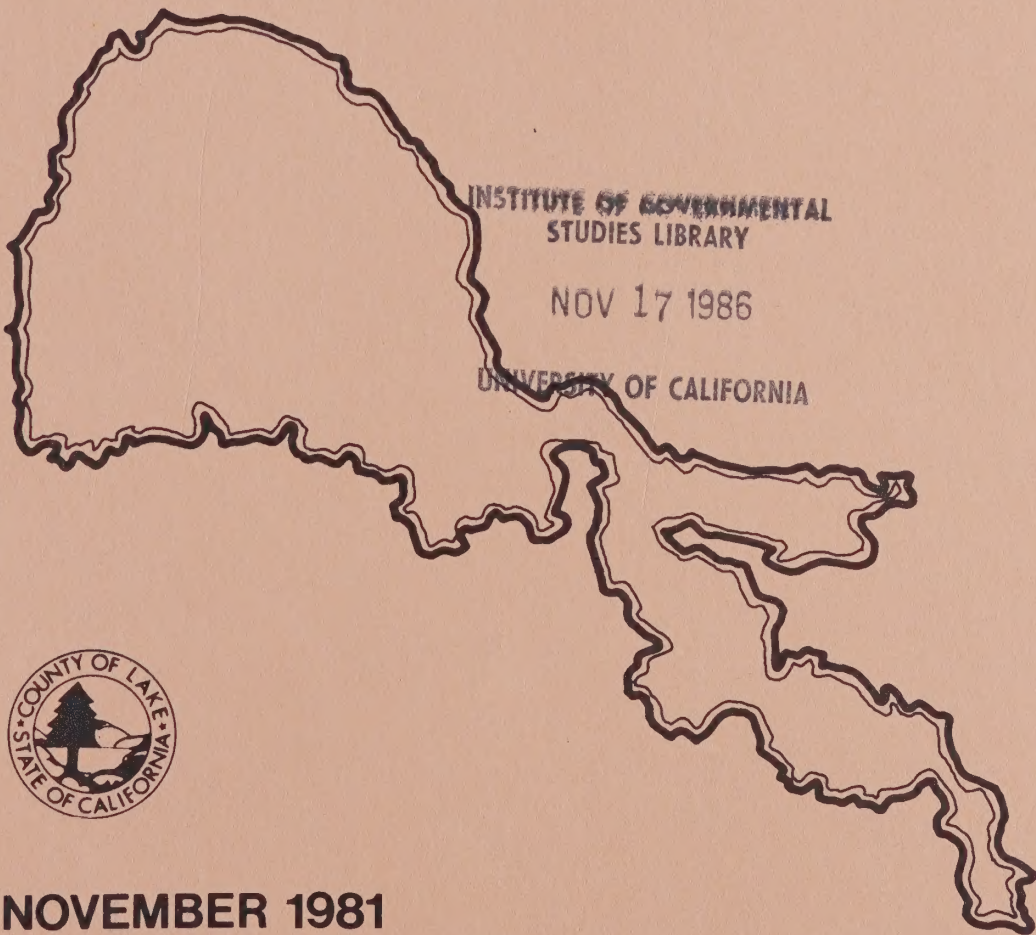


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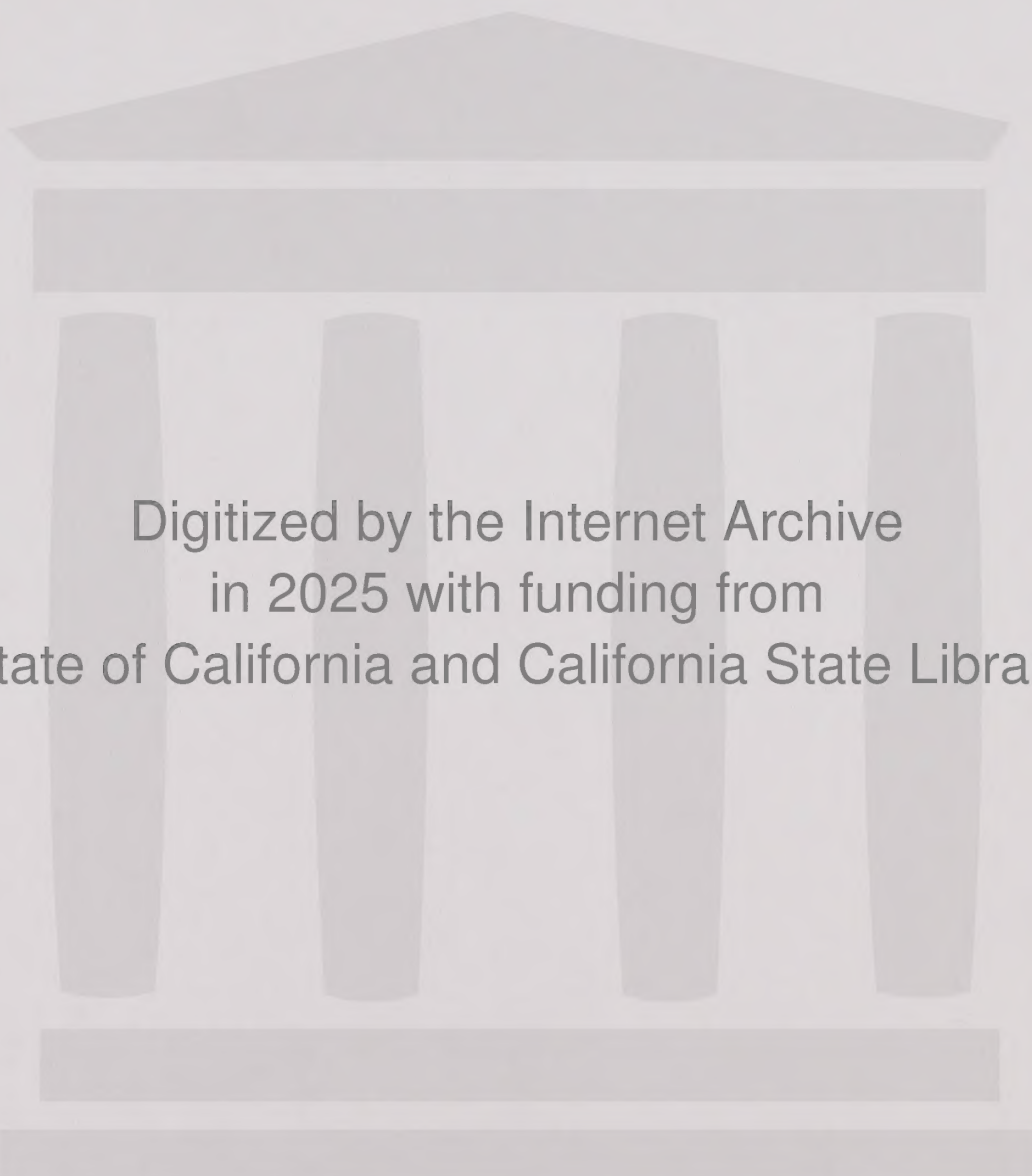
COUNTY OF LAKE GENERAL PLAN



NOVEMBER 1981

COUNTY OF LAKE
GENERAL PLAN

NOVEMBER 1981



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1 BOARD OF SUPERVISORS, COUNTY OF LAKE, STATE OF CALIFORNIA

2 RESOLUTION NO. 81-504

3 RESOLUTON ADOPTING THE LAKE COUNTY GENERAL PLAN

4 WHEREAS, the Board of Supervisors has conducted public
5 hearings on the nine mandatory elements and two optional elements
6 (Clear Lake and Geothermal) of the Lake County General Plan and
7 their appendices which are attached hereto; and

8 WHEREAS, the Planning Commission has conducted fourteen (14)
9 extensive public hearings on the General Plan and the attached
10 General Plan has been approved by the Planning Commission; and

11 WHEREAS, the Planning Commission has certified the
12 Environmental Impact Report for said General Plan; and

13 WHEREAS, the Office of Planning and Research (OPR) has made
14 comments on the draft General Plan as approved by the Planning
15 Commission and this Board has reviewed those comments and
16 has incorporated changes in the General Plan in response to
17 those comments.

18 NOW, THEREFORE, be it resolved by the Board of Supervisors
19 of the County of Lake, that it FINDS, DETERMINES, ORDERS and
20 HEREBY DECLARES AS FOLLOWS:

21 1. The Board of Supervisors hereby approves and adopts
22 the attached General Plan which consists of nine mandatory
23 elements and two optional elements (Clear Lake and Geothermal)
24 and their appendices.

25 2. The adoption of said General Plan is in the public
26 interest.

27 3. The Board of Supervisors has reviewed and considered
28 the environmental effects of the General Plan as set forth in the

1 Programmed Environmental Impact report.

2 4. The adverse environmental effects of adoption of the
3 General Plan which cannot be mitigated are overridden by:

- 4 a) The desirability and need of providing an adequate
5 supply of safe and affordable housing for the
6 citizens of Lake County.
- 7 b) The orderly expansion and efficient use of public
8 facilities and services and the provision of
9 adequate housing sites.
- 10 c) The desirability of determining the nature,
11 location, and extent of the geothermal and
12 mineral resources in Lake County as well as the need
13 for increased electrical power generation and
14 mineral extraction.
- 15 d) The desirability of increased opportunities for
16 employment and commerce in Lake County.

17 5. The Board of Supervisors finds that the General Plan
18 responds to the public desires to maintain the rural and resort
19 character of Lake County.

20 6. The Clerk of the Board is hereby authorized and directed
21 to endorse the General Plan.

22 7. The Clerk of the Board is hereby directed to file a
23 Notice of Determination on the sixth working day after this final
24 adoption of the General Plan.

25 This Resolution was passed by the Board of Supervisors
26 of the County of Lake at a regular meeting thereof on the 24th
27 day of November, 1981, by the following vote:

28 ///

AYES: Supervisors Day, Larson, Couch, Combs & Wilcox

NOES: None

ABSENT OR NOT VOTING: None

Walter C. Wilcox
WALTER C. WILCOX, Chairman
Board of Supervisors

ATTEST: LOIS R. HESTERBERG
County Clerk

By: *Cynthia Smith*
Deputy

APPROVED AS TO FORM:

CAMERON L. REEVES
County Counsel

By: *Cameron L. Reeves*
Deputy



ACKNOWLEDGEMENTS

The following individuals have contributed greatly in the preparation of the Lake County General Plan.

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I. INTRODUCTION

The map illustrates the geographical layout of Clear Lake County, California. Key features include:

- Water Bodies:** Lake Pillsbury, Upper Lake, Clear Lake, Lower Lake, Little Indian Valley Reservoir, and several creeks (Red Bluff, Middle, Butte, Placer, and Clear).
- Cities and Towns:** LAKEPORT, KELSEYVILLE, COBB, MIDDLETOWN, CLEARLAKE OAKS, and CLEARLAKE HIGHLANDS.
- Roads:** Major roads are marked with numbers in circles, including SR 1, 20, 29, 40, and 53.
- Geographical Features:** The map shows the county's irregular boundary, major creeks, and various reservoirs.

WHAT IS A GENERAL PLAN?

Each city and county in California is required by State law to prepare and adopt a General Plan (Calif. Govt. Code Sec. 65302). The primary function of the General Plan is to allow the County to consciously consider and shape its own future. The Plan sets forth the County's goals, objectives, and policies regarding future growth and development. The Plan must cover all territory within the boundaries of the County.

A number of subject areas must be addressed in the Plan, according to State law. These include: land use, circulation, housing, open space, conservation, safety, seismic safety, noise, and scenic highways. In addition, a community may choose to examine issues or resources that are of special interest. Lake County possesses two resources in particular that merit special attention, Clear Lake and geothermal resources. To insure that their development and use are wisely managed, two additional elements are included as part of the County's Plan.

Importantly, the County's General Plan is general, comprehensive, long-term, and internally consistent.

- As the name implies, the Plan is general in that it provides broad guidelines for development in the County, rather than specific and detailed instructions on how and where to build. The Plan's intentions are carried out by regulatory tools such as zoning and subdivision ordinances. The Plan should be flexible and allow public and private investors broad discretion in making land use decisions, while at the same time assure that public policies and goals are realized.
- It is comprehensive in that it addresses a wide range of issues that will affect the County's desirability as a place to live and work. The Plan provides the County with the means to consider all these concerns in an integrated and coordinated fashion.
- It is long-term in that it looks into the future--not 2 or 5 years, but typically 15-20 years, and beyond. The Plan represents both an evaluation and vision of the future, and the goals and policies are aimed at guiding development in that direction. In the absence of such a perspective, development proposals are approved one-by-one, in a piecemeal fashion. Such an approach can lead to serious problems. For example, development must occur with full realization of its impacts on the capacity of water supplies, roadways, recreation areas, etc. A long-term perspective can help identify and plan for these types of constraints and needs.
- It is internally consistent in that the goals, objectives, policies, principles, standards, and plan proposals in the Plan do not contradict one another and present a comprehensive, uniform program for development. Similarly, the assumptions and projections used in the General Plan should be uniform and consistent. Without consistency, citizens will be uncertain about the policies and standards of the County; landowners, business, and industry will be confused about the

priorities and standards contained in the Plan, making their own decision-making more difficult; and other public agencies may use the confusion in the General Plan to defend their own viewpoints. Beyond this, inconsistencies in the General Plan leave the jurisdiction open to expensive and lengthy litigation to resolve what already should have been settled.

The General Plan should not be taken as the final statement of the County's vision. With time, its population will change, its goals will be redefined, and the physical environment in which its residents live and work will be altered. The County will undergo change continuously and at best, the Plan represents a summary of the activities of planning and hopes for the future at this particular point in time. In order for the Plan to be a useful document, it must be periodically revised to respond to and reflect changing conditions.

WHY IS A GENERAL PLAN PREPARED?

The General Plan is a tool to be used by the County to initiate and respond to change and growth. The Plan is developed to respond to the shared needs of Lake County residents including: protection of the interests of future generations; promotion of a healthy, safe, attractive and prosperous environment; protection of scarce or environmentally sensitive resources, and development of effective public services at the lowest possible cost.

The Plan establishes broad community goals and policies which are to be used as guidelines for allocating the County's resources over the next 20 years to best meet the community's needs. More specifically, the policies provide the basis for developing zoning and subdivision regulation, and other decisions on location, intensity, and design of public facilities and private land use. Thus, the General Plan is a policy document intended to help public decision-makers address development and growth issues in a manner that works toward the achievement of the County's stated goals.

At the same time, the Plan helps to eliminate some of the uncertainty with which the private market must contend. The Plan does this by stating the County's intentions with respect to development location, intensity, and standards. Thus, private developers can proceed with their plans in full knowledge of the County's desires and expectations. The Plan, as the County's policy statement, works to protect private interests from arbitrary public decisions.

HOW IS THE GENERAL PLAN ORGANIZED?

The General Plan is organized into seven parts and a set of technical appendices.

- Part I, Introduction, describes the purpose and value of the General Plan;

- Part II, Overview, provides an introduction to Lake County's lifestyle and the critical issues currently facing the County.
- Part III, Countywide Goals, presents the County's goals for development.
- Part IV, Community Development Plan, presents specific objectives and policies that relate to the physical development of the community. Subject areas include land use, transportation, housing, and health and safety.
- Part V, Resource Management and Conservation Plan, presents specific objectives and policies for the protection of life, health and property from natural hazards. This chapter includes discussions of open space and conservation.
- Part VI, Implementation, presents an overall program for the implementation of the General Plan.
- Part VII, Environmental Assessment, describes the environmental consequences of implementing the General Plan.
- The Technical Appendices contain a series of working papers and memos prepared for the General Plan Citizen's Advisory Committee as a source of background information on important subject areas.

The mandatory elements required by the State and the two optional elements, Clear Lake and geothermal resources, have been grouped into two "plans," according to subject matter and purpose (see Figure I-1). The two plans are the Community Development Plan and the Resource Management and Conservation Plan, as described above.

The presentation of each subject area generally follows a similar organization:

- a summary of existing conditions provides background to the situation and critical issues;
- objectives express the County's Commitment to addressing the issues and provide general guidance for more specific policies; and
- policies indicate a course of action and detail the standards and guidelines necessary to fulfill the goal and objectives.

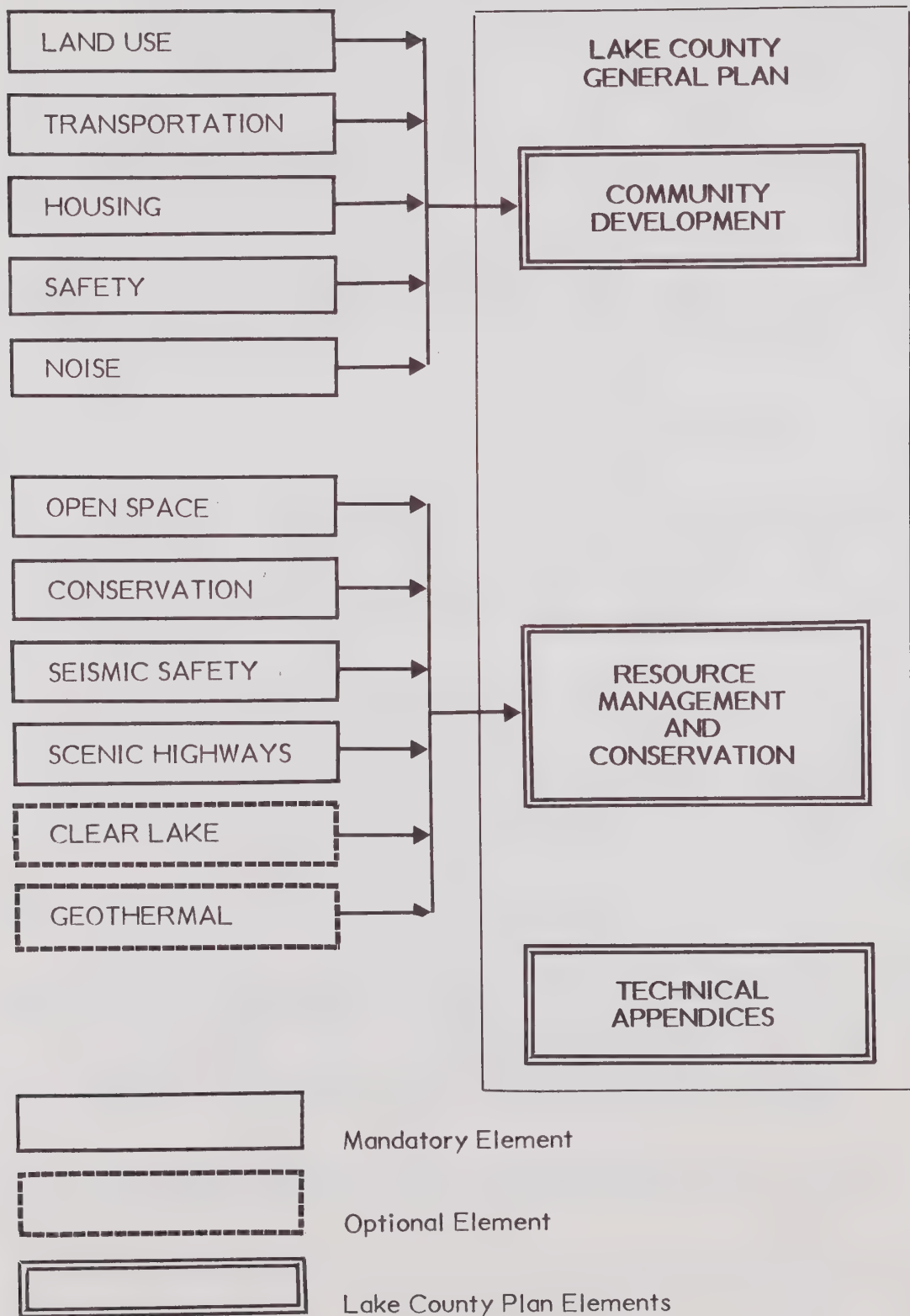
Each objective is printed in bold and is followed by a set of policies intended to provide guidance towards attaining the objective.

For example:

I. (Objective)

I.1 (Policy)

I.2 (Policy)



**Figure I-1
GENERAL PLAN ORGANIZATION**

This format allows people using the General Plan to turn to the section that interests them and quickly gain a perspective of the County's policies on that subject area. It is important for people using the Plan to realize that the various elements are interrelated, and that the Plan should be viewed in total and not section by section. Table I-1 shows the Working or Study Papers' compliance with the requirements for the General Plan elements. (Working and Study Papers are located in the technical appendices.)

The Plan's policies are presented both as written statements and as policy maps. Each of these are complementary; the written policies establish the basic intent or approach to be taken, and the policy maps show the intended spatial application of the written policies. It is important that both the text and policy maps be referred to when making future planning decisions. Other illustrative figures are included to assist interpretation of written policies.

TABLE I-1
COMPLIANCE WITH REQUIREMENTS FOR
GENERAL PLAN ELEMENTS

<u>Element</u>	<u>Applicable Section*</u>	<u>Required Subject</u>	<u>Study Paper ("S.P.") Working Paper ("W.P.") or Memorandum</u>
Land Use	65302(a)	Distribution and location of land uses	S.P. #2: Land Use Memo: Alternative Land Use Proposals
		Population density	S.P. #2: Land Use Memo: Population, Employment, and Housing Memo: Alternative Land Use Proposals
		Building intensity	S.P. #2: Land Use W.P. #1: Public Facilities and Services Memo: Alternative Land Use Proposals
		Flooding	W.P. #2: Hazards
Circulation	65302(b)	Thoroughfares	W.P. #5: Circulation
		Transportation routes	W.P. #5: Circulation
		Terminals	W.P. #5: Circulation
		Other local public utilities and facilities	W.P. #1: Public Facilities and Services Regional Transportation Plan
Housing	65583(a)	Population and employment trends	Memo: Population, Employment and Housing. Housing Element, General Plan (9/30/81)
		Household and housing characteristics	Memo: Population, Employment and Housing. Housing Element, General Plan (9/30/81)
		Land Inventory	S.P. #2: Land Use Memo: Alternative Land Use Proposals

*California Government Code unless otherwise noted.

<u>Element</u>	<u>Applicable Section*</u>	<u>Required Subject</u>	<u>Study Paper ("S.P.") Working Paper ("W.P.") or Memorandum</u>
Housing (Continued)		Government and nongovernmental constraints	Housing Element, General Plan (9/30/81)
		Special housing needs	Memo: Population, Employment, and Housing Housing Element, General Plan (9/30/81)
		Energy conservation opportunities	Housing Element, General Plan (9/30/81)
	65583(b)	Goals, objectives, and policies	Housing Element, General Plan (9/30/81)
	65583(c)	Implementation Program	Memo: Population, Employment, and Housing Housing Element, General Plan (9/30/81)
	65584	Regional housing needs	Housing Element, General Plan (waived by HCD)
Conservation	65302(d)	Water conservation	W.P. #1: Public Facilities and Services W.P. #5: Natural Resources
		Forests	W.P. #3: Natural Resources
		Soils	W.P. #3: Natural Resources
		Rivers and other waters	W.P. #1: Public Facilities and Services (water supply) W.P. #2: Hazards (flooding and water quality) W.P. #3: Natural Resources (environmentally sensitive areas) Memo: Geothermal Resource Overview (revised 9/9/81)
		Harbors	Not applicable
		Fisheries	W.P. #3: Natural Resources W.P. #4: Clear Lake

*California Government Code unless otherwise noted.

<u>Element</u>	<u>Applicable Section*</u>	<u>Required Subject</u>	<u>Study Paper ("S.P.") Working Paper ("W.P.") or Memorandum</u>
Conservation (Continued)		Wildlife	W.P. #3: Natural Resources W.P. #4: Clear Lake
		Minerals	W.P. #3: Natural Resources
		Other natural resources	W.P. #3: Resources
Open Space	65302(e) (also 65560 et seq.)	Fish and wildlife	W.P. #3: Natural Resources W.P. #4: Clear Lake
		Ecological and other scientific study areas	W.P. #3: Natural Resources W.P. #4: Clear Lake
		Rivers, streams, bays and estuaries	W.P. #3: Natural Resources
		Coastal beaches, lakeshores, banks of rivers and streams, watershed lands	W.P. #3: Natural Resources W.P. #4: Clear Lake
		Forest lands, range- land, agricultural lands and other food and fiber production areas	W.P. #3: Natural Resources
		Groundwater recharge areas	W.P. #1: Public Facilities and Services (water supply) W.P. #2: Hazards (ground- water pollution W.P. #3: Natural Resources (hydrology)
		Commercial fisheries	W.P. #4: Clear Lake
		Minerals	W.P. #3: Natural Resources

*California Government Code unless otherwise noted.

<u>Element</u>	<u>Applicable Section*</u>	<u>Required Subject</u>	<u>Study Paper ("S.P.") Working Paper ("W.P.") or Memorandum</u>
Open Space (Continued)		Scenic, historic, cultural resources	W.P. #3: Natural Resources W.P. #4: Clear Lake W.P. #5: Circulation (scenic highways)
		Areas suited for parks and recreation purposes	W.P. #1: Public Facilities and Services W.P. #3: Natural Resources W.P. #4: Clear Lake
		Links between major recreation and open space reservation (including utility easements, banks of rivers and streams, trails and scenic highway corridors)	W.P. #4: Clear Lake W.P. #5: Circulation
		Earthquake fault zones	W.P. #2: Hazards
		Areas of unstable soils	W.P. #2: Hazards
		Floodplains	W.P. #2: Hazards
		Watersheds	W.P. #3: Natural Resources
		High fire risks	W.P. #2: Hazards
		Areas required for protection of water quality and water reservoirs	W.P. #2: Hazards W.P. #3: Natural Resources W.P. #4: Clear Lake
		Areas required for protection and enhancement of air quality	W.P. #2: Hazards Memo: Geothermal Resource Overview (Revised 9/9/81)

*California Government Code unless otherwise noted.

<u>Element</u>	<u>Applicable Section*</u>	<u>Required Subject</u>	<u>Study Paper ("S.P.") Working Paper ("W.P.") or Memorandum</u>
Seismic Safety	65302(f)	Surface ruptures from faulting	W.P. #2: Hazards
		Ground shaking	W.P. #2: Hazards
		Ground failures	W.P. #2: Hazards
		Seismically induced waves (tsunami and seiche)	W.P. #2: Hazards
		Mudslides	W.P. #2: Hazards
		Landslides	W.P. #2: Hazards
		Slope stability	W.P. #2: Hazards Seismic Safety Element (adopted 6/13/77)
Noise	65302(g)	Noise exposure contours	W.P. #5: Circulation Memo: Geothermal Resource Overview (Revised 9/9/81)
		Highways and freeways	W.P. #5: Circulation
		Arterials and local streets	W.P. #5: Circulation
		Railroad and rapid transit	Not applicable
		Airports	W.P. #5: Circulation
		Industry	W.P. #5: Circulation Memo: Geothermal Resource Overview (Revised 9/9/81)
		Community noise exposure inventory	W.P. #5: Circulation
		Noise sensitive land uses	W.P. #5: Circulation Noise Element adopted 4/18/78)

*California Government Code unless otherwise noted.

<u>Element</u>	<u>Applicable Section*</u>	<u>Required Subject</u>	<u>Study Paper ("S.P.") Working Paper ("W.P.") or Memorandum</u>
Noise (Continued)	Noise Element Guidelines (Office of Noise Control, February 1976)	Noise complaint files (to identify community attitudes)	W.P. #5: Circulation Memo: Geothermal Resource Overview (Revised 9/9/81)
		Community noise survey	W.P. #5: Circulation
		Ambient noise level	W.P. #5: Circulation
Scenic Highway	65302(h)	Scenic highways	W.P. #5: Circulation
Safety	65302(i)	Fires	W.P. #1: Public Facilities and Services W.P. #2: Hazards
		Geology	W.P. #2: Hazards
		Evacuation routes	W.P. #5: Circulation Memo: Geothermal Resource Overview (Revised 9/9/81)
		Peak load water supply	W.P. #1: Public Facilities and Services
		Road widths	W.P. #5: Circulation
		Clearances around structures	W.P. #2: Hazards

*California Government Code unless otherwise noted.

II. OVERVIEW



WHAT MAKES LAKE COUNTY A DESIRABLE PLACE TO LIVE?*

Lake County's natural scenic beauty has attracted residents and visitors to the area for decades. Naturally endowed with mountains, valleys, lakes and rivers, the County is a major recreation/tourist area in northern California. The location of the County is within a short driving distance of several major population centers. Figure II-1 shows the location of Lake County and Figure II-2 provides the regional setting. An important agricultural center, Lake County is a large producer of pears, walnuts, and grapes.

The County's rural lifestyle, numerous recreational opportunities, and overall high environmental quality make it an attractive place to live, work, and recreate. As a result, Lake County has experienced a rapid rate of growth over the past ten years. The County is currently the fastest growing of California's north coast counties, increasing at an annual average rate of 8.6 percent over the ten year period between 1970 and 1980. Nearly all of this growth can be attributed to the in-migration of new residents, principally people moving into the County to retire or to escape the faster paced life of larger urban areas.



Figure II-1
LAKE COUNTY LOCATION

*A questionnaire completed by the members of the General Plan Citizens Advisory Committee (CAC), soliciting their views and comments on the County, provided valuable insight into Lake County's livability.

Figure II-2
REGIONAL MAP



Rural Lifestyle

Lake County offers a rural lifestyle appealing to residents and visitors of the area. The slow-paced lifestyle, the lack of traffic congestion, the quietness, the friendly and supportive community, and vast open spaces contribute to the County's rural character. Lake County has a total population of 36,366 people according to 1980 Census data. Most residents live in small communities scattered around the shoreline of Clear Lake. Development has occurred at low densities, adding to the small town character.

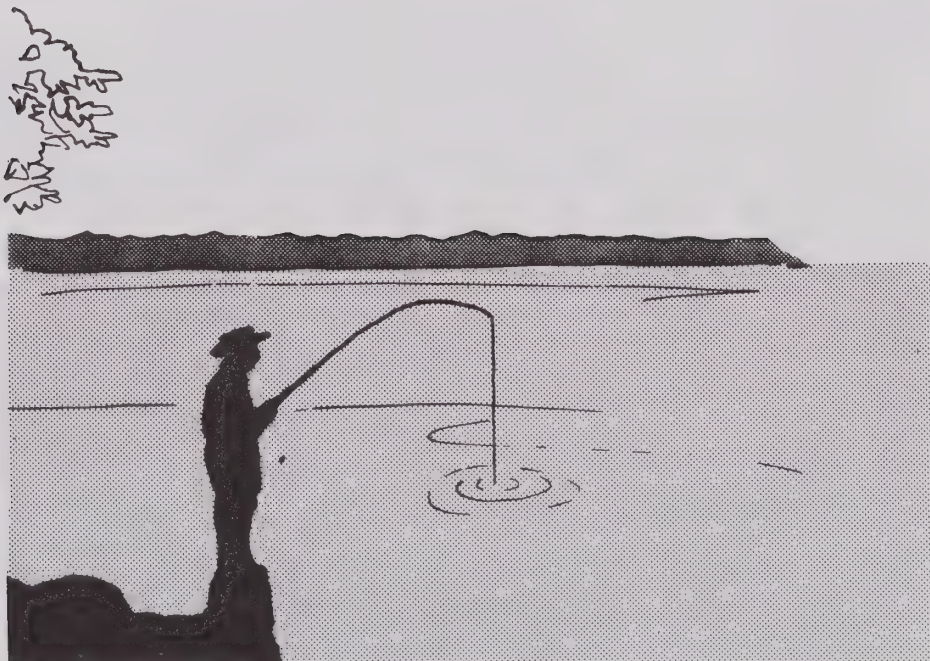
Much of the total land supply is used for range and farming or has been left undeveloped; thus, giving the County large areas of open space. The northern third of Lake County lies within the Mendocino National Forest and is undeveloped, except for some timbered areas and some recreational development. These open spaces and natural areas greatly contribute to the beauty and rural character of the County.



Recreational Opportunities

Lake County's wide range of recreational activities has long been a source of enjoyment for residents and visitors to the area. Tourists first began coming to the County to enjoy the hot springs and mineral baths offered at resorts in the Cobb Mountain area. Currently, recreational activities are concentrated around Clear Lake, the largest freshwater lake in the State. The lake's recreational activities include fishing, swimming, and boating. Several State and County parks offer public access to the lake and shoreline, and areas for picnicking and hiking. Many of the County's residents live within a five mile radius of the lake's shoreline and thus, are in close proximity to these recreational opportunities.

Recreation areas also exist outside of the Clear Lake shoreline area. Mendocino National Forest and Boggs Mountain State Forest, for example, offer wildland areas for such outdoor activities as hiking, camping, hunting, fishing, and picnicking. Numerous private recreation facilities and resorts exist throughout the County which offer accommodations to visitors. Many have golf courses, tennis courts, and swimming pools.



Environmental Quality

The high level of environmental quality enjoyed by all residents and visitors, represents a basic component of the County's livability. The nearly pristine quality of much of the area's natural resources--air, water, wildlife, habitat areas, etc.--is a primary reason for the high environmental quality of the County.

The County's physical character with its mountainous regions, forested lands, and lake areas creates a variety of distinctive environments and scenic vistas. The overall air quality is excellent. Lake County is also endowed with a number of significant natural areas. These areas support a variety of flora and fauna; contribute to such natural processes as water drainage, flood control and pollution control; and help maintain the natural scenic beauty of the area.



WHAT CRITICAL ISSUES FACE LAKE COUNTY?

The County's rapid development has not occurred without growing pains. Development, particularly around the shoreline of Clear Lake, has been done in an uncontrolled, piecemeal manner. Many "hidden costs" of development, including environmental pollution, degradation of natural resources, overcrowding of public schools, septic tank/wastewater system failures, and water supply problems, have been passed on to the public. All of these consequences of uncoordinated development make the need and desirability for a comprehensive plan all the more important.

In order to adequately plan for future growth and development, it is important to identify the critical issues facing the County. Eight broad categories of issues stand out as the County's most critical. These include preservation of rural character, protection of agricultural resources, the role of tourism, expansion of economic opportunities, development of geothermal resources, development of water sources, use of Clear lake, and existing parcelization patterns.

Rural Character

A major factor drawing people to the County is its rural character and corresponding lifestyle. Some citizens may welcome growth and the benefits it brings, while others view the costs of growth as a loss of a way of life. The development patterns which will accommodate this growth will play a major role in the loss or the strengthening of the County's rural character. Alternative growth patterns could be developed that place most of the growth in the larger urban areas of the County, thus encouraging urbanization only where it already exists. As more and more people come to Lake County, some loss of quietness, open space, and scenery can be expected. The challenge is to insure that these losses do not result in a change to the County's basic lifestyle.

Preservation of Agricultural Resources

Agriculture has been and will continue to represent one of the mainstays of Lake County's economy. However, appropriate measures must be taken to insure that the agricultural resources are protected and that agriculture can continue as a viable enterprise. Some of the factors directly influencing preservation of the County's agriculture include surrounding land values, the availability of water, use of pesticides, commodity prices, and surrounding land uses. Currently rural residential development is converting productive agricultural land to non-agricultural homesites. Clear lines need to be drawn between what should be developed for urban uses and what should be retained as agriculture.

Role of Tourism

Lake County has a reputation as a major recreation center in northern California. The County's tourism industry is a principal component of its economic base. Growth in tourism, as in the geothermal industry, has

associated benefits and disadvantages. Clearly, increased tourism benefits the County by generating more jobs, goods and services. However, this growth could also cause substantial environmental degradation and loss of a rural lifestyle. In turn, tourism may suffer as environmental quality deteriorates. Development patterns which accommodate growth of the tourism industry must be planned with these factors in mind.

Economic Development

Lake County's economy is geared primarily to providing services--services to support its existing residents and the many visitors who come to enjoy the County's amenities. The employment in service-type sectors (such as retail trade, service, government, etc.) far outnumber those in the basic industries such as manufacturing, and agriculture. Yet it is these latter activities that not only provide revenues for materials, food, and manufactured goods which the region cannot produce itself, but also support the "service" activities. The development of basic industries in the County is impeded because of the difficulty of transporting goods in and out of the County. Efforts to stimulate the local economy must take into consideration transportation problems, as well as diversification of the economic base. Areas of future economic expansion include the development of geothermal resources contained in the County, and the formation of small businesses and light industrial enterprises.

Development of Geothermal Resources

Geothermal development in the County has many associated benefits and disadvantages. Potential benefits include energy interdependence through the use of geothermal driven power plants and geothermal warm water systems for heat, increased County revenues from reimbursement of federal leasehold revenues and tax revenue, and an increase in jobs. However, these benefits must be weighed against the significant problems already experienced in areas being explored or developed for its geothermal resources. These problems include air pollution, increased noise levels, increased traffic levels, and potential water pollution. Thus, a balance between countywide benefits and localized environmental impacts of geothermal development is needed.

Development of Water Sources

A major responsibility of the County is to assure the availability of an adequate supply of water to meet the future demands of its water users. Currently, the principal water sources used by the more densely populated areas of the County include Clear Lake, Scotts Valley groundwater basin, Big Valley groundwater basin, Upper Lake groundwater basin, and Collayomi groundwater basin.

In order to accommodate any substantial future growth, new water sources will have to be developed. Both the Scotts Valley and the Big Valley groundwater basins in recent years have shown signs of a deterioration in supply. The appropriation of Clear Lake water rights to Yolo County Flood Control and Water Conservation District has serious repercussions for Lake

County's own water supply. The County must try to optimize its water resources without encroaching on Yolo County's water entitlements.

Use of Clear Lake

Clear Lake is the County's most valuable natural resource. It serves as a magnet drawing tourists from all over the state, as a reservoir for domestic and irrigation purpose in Lake and Yolo counties, as a scenic resource, and as a recreation area for boating, fishing, swimming, and other water-related activities.

All of these uses of the lake require management and protection of the lake to insure that its value will be sustained and its full economic potential reached. Future development around the lakeshore should be planned to ensure that it is consistent with the biological, scientific, aesthetic, and economic value of the lake.

Parcelization Patterns

It is difficult to ascertain the extent of the number, location, size, and status (with or without dwelling units) of County lots created by major and minor subdivision. Many lots were created early this century and sold to people on a "subscription" basis with the buyer rarely seeing the property. Since many of these "historic" lots were created before subdivision regulations required basic improvements, most are without adequate road, water, and sewer systems. The name "paper subdivisions" is often given to these land divisions because they exist only on paper. Lots created in this manner were platted over the landscape without regard to topography--a lot may exist on a steep slope or on a mountain top--miles from needed infrastructure.

The creation of these types of lots was not, however, limited to the early part of this century. During the mid-to-late 1960's thousands of lots were created which, even today, exist on paper only. Consequently, a rational pattern and intensity of development may be difficult to achieve if lot sizes are too small and cannot be easily assembled.

III. COUNTYWIDE GOALS



The Countywide goals set forth the ideals of the citizens of Lake County. They are general statements that express the community's aspirations and are intended to provide a guide for the County's growth that will best use its resources and potential. They are a direct outgrowth of an evaluation of the County's future challenges and opportunities, and the diligent and tireless efforts of the Lake County Citizens Advisory Committee, a broad-based citizens group created to help shape the County's General Plan.

COMMUNITY DEVELOPMENT

Growth shall be encouraged such that the location, timing, and intensity of future development respect the rural setting of the County and are consistent with the availability of services. Lake County is a special place with a unique rural charm. Unmanaged growth can disrupt the County's character and overburden services such as water supplies, waste facilities, schools, and roads. The intent of this goal is to foster growth in a manner that preserves the predominantly rural lifestyle and unique qualities that make the County an attractive place to live.

SOCIAL INTERACTION

A diverse community in terms of income, age, occupation, race, religion, and lifestyle shall be encouraged, and the small town appearance and sense of community shall be preserved and fostered. A wide range of people live, work, and recreate in the County in its healthy, unhurried atmosphere. The intent of this goal is to preserve these qualities and enhance neighborliness and community pride.

HOUSING

Opportunities for safe, decent housing in a satisfying living environment shall be offered to all economic segments of the community. Housing costs are rising, and households are finding fewer choices in the type, size, and location of housing at an affordable price. The intent of this goal is to recognize these problems and to express the County's firm commitment towards meeting the community's housing needs.

ECONOMIC DEVELOPMENT

Efforts to stimulate the local economy and to attract new employment opportunities shall be promoted. Lake County's economy is now supported primarily by agricultural, retail, and recreational activities. The intent of this goal is to diversify this economic base by taking advantage of local resources such as geothermal energy and encouraging the formation of small businesses and light industrial enterprises, as well as by expanding commercial and recreation resort activity, protecting and expanding agriculture and forestry, and increasing local processing of raw materials.

AGRICULTURE

The agricultural resources of the County shall be protected and efforts to preserve their continued productivity shall be promoted. Agriculture represents a significant component of the County's economy and lifestyle. Yet, the loss of valuable agricultural lands in the County, and in the entire country as well, continues. The intent of this goal is to recognize the value of the County's agricultural resources and to commit the County to insuring the careful management of them.

TRANSPORTATION

A safe, efficient transportation system shall be provided that enables people and goods to move conveniently both within and to and from the County. The intent of this goal is to meet the County's needs for transportation and mobility.

PUBLIC SERVICES

Public services shall be provided to meet the needs for education, recreation, cultural entertainment, protection of public safety and health, and civic pride. The physical, mental, social, and material well-being of a community is largely influenced by the availability of high quality schools, cultural facilities, recreation, fire protection and law enforcement services, public utilities, and other community services. The intent of this goal is to recognize the importance of these needs and to insure an acceptable level of these services in the future.

NATURAL RESOURCES

The natural resources of the County shall be used for the benefit of County residents and visitors in a manner that conserves these resources for future use. These resources--air, water, wildlife, soils, minerals, geothermal, etc.--contribute to the County's high environmental quality. However, the supply of these resources is not infinite, and they must be managed well to insure their future productivity. The intent of this goal is to commit the County to a conservation ethic that encourages the careful management of natural resources to avoid their exploitation, destruction, or neglect.

PUBLIC SAFETY

The health and well-being of the community and the physical safety of the property shall be insured. A host of natural hazards--some obvious and

some imperceptible--can endanger public safety and cause damage to property. The potential for natural hazards like wildfires, landslides, rockfalls, earthquake faults, flooding, etc. need to be carefully assessed. The intent of this goal is to recognize these natural dangers and to permit development in these areas only with an acceptable level of risk.

In addition to the aforementioned countywide goals, specific policies, objectives, and implementation measures are listed in the following sections of the plan. These policy statements will consistently guide community development and resource management land use decisions. These policies shall be uniformly carried out except in those limited situations where common sense and compelling, countervailing circumstances require additional consideration.

IV. COMMUNITY DEVELOPMENT PLAN



INTRODUCTION

Lake County is one of the fastest growing counties in northern California. Between 1970 and 1980, the population increased nearly 90 percent to over thirty-six thousand. The overview of the community, provided in Part II, provides strong evidence that the County will continue to enjoy popularity as a place to live, work, and recreate. In order to assure that the future needs of the County are satisfied, this portion of the General Plan contains provisions that relate to the physical development of the community. The policies address a diverse range of issues including:

- How much land is needed to meet future demands for residences, commercial businesses, industrial enterprises, agricultural production, recreation, and public services?
- How can these uses best be developed to take advantage of site characteristics, road access, availability of public services, and adjacent land uses?
- What roads need to be improved or constructed in order to insure that traffic movement is free of congestion?
- How can housing be made available and affordable to all economic groups of the County?
- What precautions can be taken to protect life and property when developing potentially hazardous areas such as fire-prone, flood-prone, or landslide areas?

Why should these issues be raised? They are raised for two reasons. First, state planning law requires cities and counties to set forth goals, objectives, principles, standards, and plan proposals for the long term physical development of the community. The specific sections of the State Government Code addressed by this Community Development Plan are identified below.

- Section 65302(a) requires preparation of a land use element which designates the proposed general distribution and general location of the uses of land for housing, business, industry, open space, education, public buildings and grounds, and other categories of public and private uses of land.
- Section 65302(b) requires preparation of a circulation element to establish a transportation system that facilitates the efficient transport of goods and the safe movement of all segments of the population.
- Section 65302(c) requires the preparation of a housing element to assure the adequate provision of housing for all segments of the community.
- Section 65302(g) requires preparation of a noise element that quantifies the community noise environment and serves to guide development to achieve noise compatible land uses.

- Section 65302(i) requires provisions for protection of the community from fires and geologic hazards.

More importantly, the second reason why the above issues are raised is because the citizens of Lake County care about their community. The Plan and its component parts are public policy statements that will enable the citizens to influence their future.

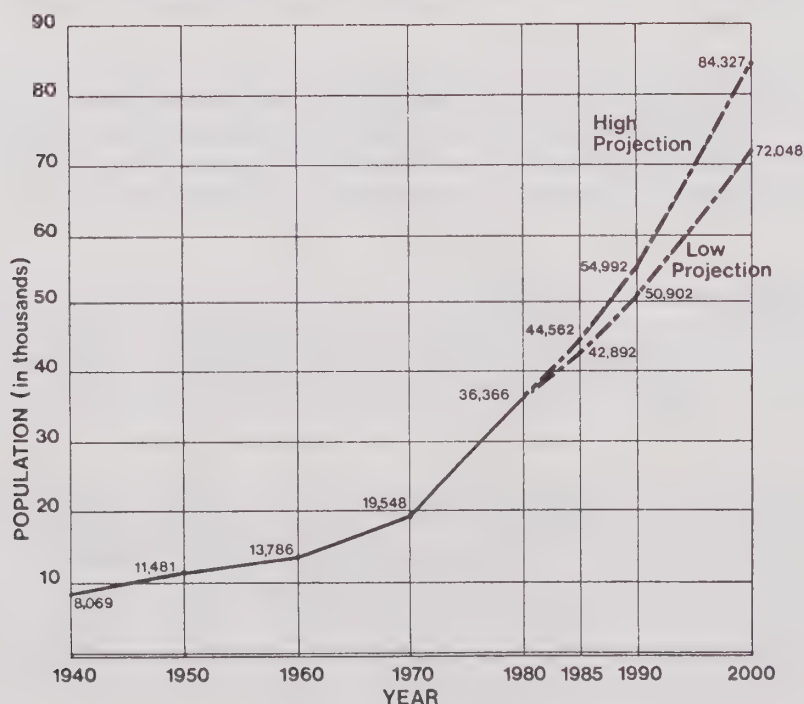
To better understand the future and formulate a logical policy framework, the following overview provides a snapshot of where the County is today, and what trends have brought it to its present status. More detailed information is provided in the Technical Appendices.

Population Characteristics

Demographic Profile

Growth in the County has been stimulated largely as a result of its desirability as a recreation destination and as a retirement community. Between 1970 and 1980, the population jumped from under 20,000 to over 36,000, most of which occurred during the latter five years. Figure IV-1 shows how dramatic the population growth has been.

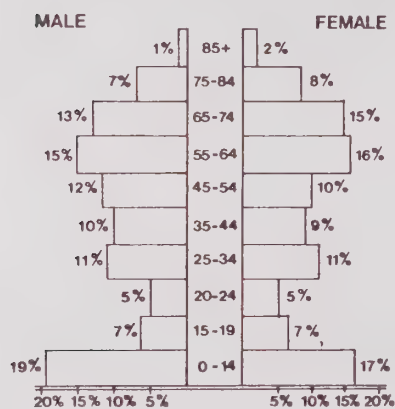
Figure IV-1
LAKE COUNTY POPULATION TRENDS



Source: U.S. Census: 1940, 1950, 1960, 1970 Update, 1980;
Sedway/Cooke Projections

The County's growth has resulted from people moving into the County, rather than from a natural increase (of births exceeding deaths) of the resident population. The vast majority of the in-migrants are retirees, and this accounts for the fact that the median age of the County of 45 years is much older than the median age in the State of 31 years. Figure IV-2 shows the age composition of the County's population by sex. It can be seen that a relatively large proportion of the population are under the age of 14 years. However, the next two largest groups are between 55 and 75 years old. This distribution of population is typical of many rural communities throughout the United States. Many young people from rural areas leave for urban areas when they reach adulthood to seek employment or continue their education, while those who remain typically have more children. This pattern, coupled with the influx of retirees, contributes to a high proportion of young and old in the County.

Figure IV-2
LAKE COUNTY POPULATION
AGE/SEX DISTRIBUTION*



Source: Department of Finance,
E-150 Series, 1977

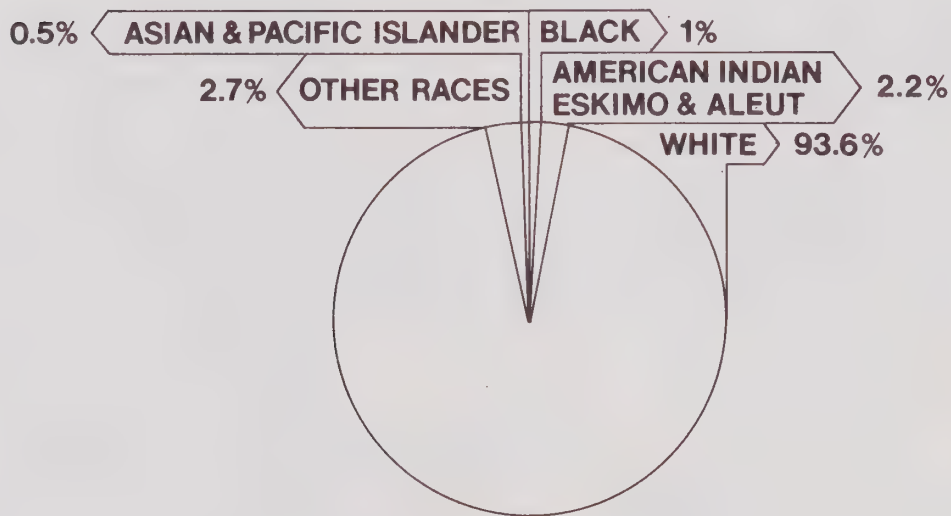
*Based on population projections
developed by Department of
Finance in 1977.

Visitor population during the peak summer months greatly increases the population in the County. Many of these tourists and second homeowners are attracted to the lake for fishing, boating, and water skiing or to the mountains for hiking, camping, and relaxation. As fuel prices continue to rise and vacationers look for recreational areas closer to home, it is expected that greater tourist numbers can be expected, particularly from Sacramento and the San Francisco Bay Area.

Socio-Economic Profile

The ethnic composition of Lake County is predominantly white, accounting for 94 percent of the County's population. Several Native American communities and a small percentage of Spanish origin comprise much of the minority population.

Figure IV-3
ETHNIC COMPOSITION*

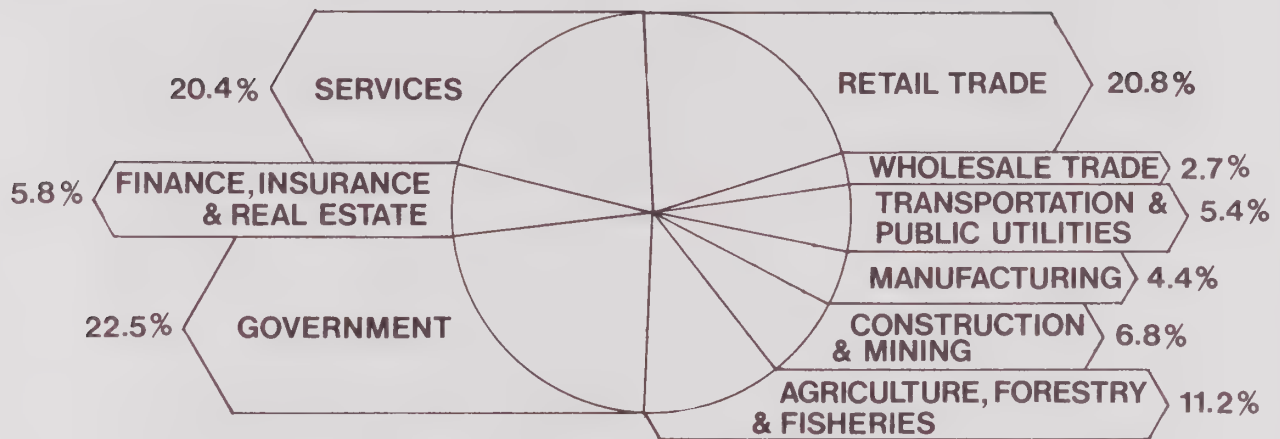


*Included among the figures is 5.2% of Spanish origin.

The 1980 County median household income of \$12,900 is considerably less than the State's at \$20,653. The sizeable difference is explained by the County's large retirement population living on fixed incomes and the seasonal employment force. Roughly 15 percent of the County's households are below the federally defined poverty level of \$5,270 for a farm family of four and \$6,200 for a nonfarm family of four.

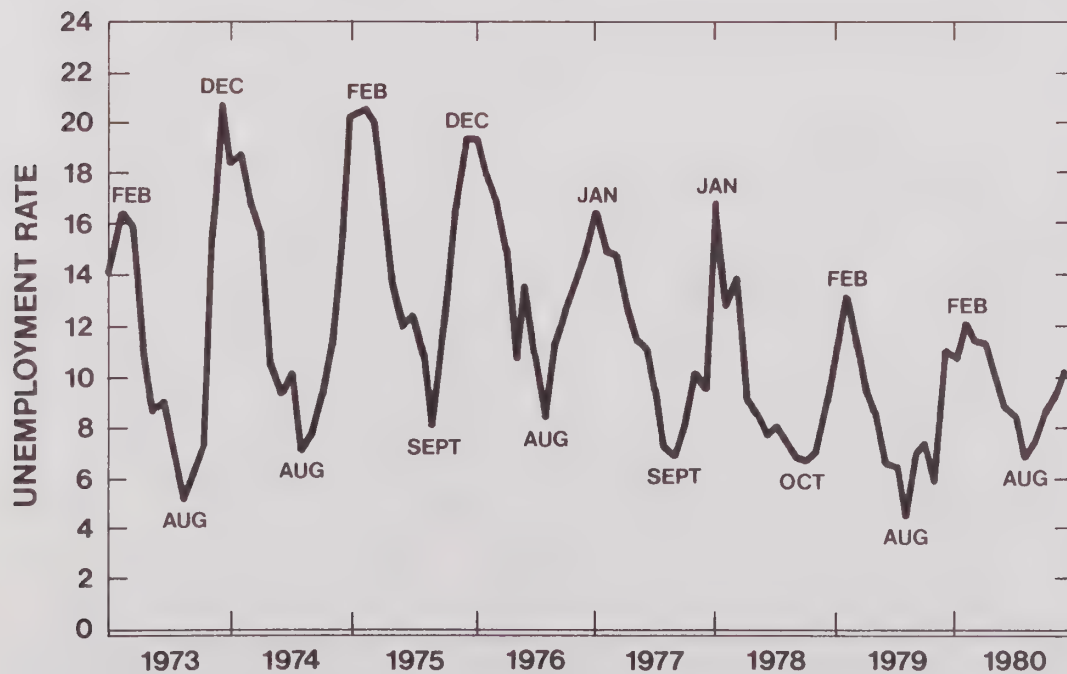
The County's economy is based primarily on agriculture and retail sales and services to both residents and tourists. The largest employment sectors of the County's 7,000 plus wage and salary earners include retail trade, services, and government, each with over 1,500 workers. Combined, they account for over three-quarters of the County's wage earners (see Figure IV-4). An additional 2,500 - 3,000 persons are estimated to be self-employed, farmers, or unpaid family workers. However, as noted earlier, employment levels fluctuate tremendously during the year, reflecting the agricultural growing season and summer tourists trade, and annual average

Figure IV-4
WAGE AND SALARY EMPLOYMENT



Source: Employment Development Department, Labor Market Newsletter, April 1980

Figure IV-5
LAKE COUNTY UNEMPLOYMENT RATES



employment figures mask the upswings and downswings in the size of the labor force (see Figure IV-5). Overall, the unemployment rate for the year ranges between 9 and 13 percent.

Economic Characteristics

The cornerstones of the County's economy are agriculture, retail sales and services, and tourism. The County produces 49 percent of the state's fresh market pears. Its fruit and nut crops accounted for over 70 percent of the County's agricultural gross value of \$36,878,305 (in 1980), a figure which has more than tripled over the past decade. This period has also witnessed the growth of the wine industry in the County. Between 1972 and 1980, the County acreage in grape production rose 940 acres to nearly 3,000 acres. While fruit and nut crops accounted for most of the County's agricultural value, the proportion from field crops, livestock and poultry, and commercial fisheries has increased (see Table IV-1). Importantly, agriculture is a unique basic industry that has an income generation potential beyond the actual gross crop value. Each dollar of revenue produced by agricultural products results in an additional two to two-and-one-half dollars of income for the County. From this perspective, the significance of agriculture to Lake County becomes even greater.

TABLE IV-1
GROSS VALUE OF AGRICULTURAL PRODUCTION
BY COMMODITY

<u>Commodity</u>	<u>1972</u>	<u>1980</u>
Fruit and Nut Crops	\$11,077,300	\$25,991,415
Field Crops	1,588,100	4,058,580
Livestock and Poultry ¹	2,519,900	6,066,580
Livestock and Poultry Products	245,900	315,605
Aquaculture (commercial fishing) ²	-	446,125
TOTAL	\$15,431,200	\$36,878,305

¹Includes livestock and poultry products (e.g., eggs, wool, and apiary products).

²Not reported in 1972.

Source: Lake County Crop Report, 1972, 1980.

While gross value of agriculture has more than tripled within the past 10 years, the growth in taxable sale receipts has more than quadrupled, increasing from \$31,544,000 in 1970 to \$147,492,000 in 1980. Within any

given year, the impact of the tourist industry can be seen as an increase in taxable sales during the summer months. It is estimated that visitors to Lake County spend nearly \$11 million annually.

The development of geothermal resources has and will continue to have an effect on the County's economy. Geothermal development contributes to an increased sales and property tax base, provides employment, and helps diversify the local economy. Assembly Bill 1905 contained provisions for counties to receive geothermal revenues earned on federal leaseholds. As a result of this bill, the County is expected to receive an average of \$344,640 per year over the next six years. The funds are to be targeted for projects associated with geothermal exploration, development, and impacts.

Projections

Basic to all planning efforts is the need to project future conditions. It is important to understand the function of growth projections in the planning process. They are only estimates, a professional judgement of what may happen, not what will or should happen. They are based on observations of past growth trends and an evaluation of how current conditions will affect the continuation of those trends. Once defined, the projections serve as the basis for determining future land requirements for houses, shopping, manufacturing, schools, and recreation and for determining service requirements for roads, water, sewerage, and solid waste disposal, and other public services.

Population Projections

Two population projections were prepared for Lake County for the years of 1985, 1990, and 2000. These projections bound a reasonable range of expected population growth. The lower projections result in a total of 72,048 people by the year 2000. The higher projection, based upon recent growth trends and a high employment growth rate, results in a total of 84,327 people by the year 2000.

In preparing the projections, historical population and employment trends were analyzed. Over the ten year period, 1970 to 1980, the County experienced an annual growth rate of 8.6 percent. If this rapid growth were to continue to the year 2000, Lake County's population would reach 127,228 people. This means additional population in excess of 4,550 people per year. It is unlikely that Lake County could sustain this rate of growth over the next two decades. The major limiting factor would be the economic base; that is, the jobs to attract the new population. Another limiting factor would be the ability of local government to provide public services such as roads, water, sewer, and schools to such a rapidly expanding population.

Each of the two population projections is a reasonable reflection of existing trends and capabilities. The lower population projection assumes an annual growth rate of 4.9 percent over the next 20 years, while the high projection results in an annual rate of 6.6 percent over the same time period (see Table IV-2 and Figure IV-1). The higher of the two projections would

probably require the location of major new basic industry in the County, a significant increase in the percent of retirees moving to the County, or some combination thereof.

TABLE IV-2
LAKE COUNTY POPULATION PROJECTIONS, 1980-2000

<u>Year</u>	<u>Low Growth Projection</u>		<u>High Growth Projection</u>	
	<u>Population</u>	<u>Average Annual Growth</u>	<u>Population</u>	<u>Average Annual Growth</u>
1980	36,366	-	36,366	-
1985	42,892	1,305	44,562	1,639
1990	50,902	1,602	54,992	2,086
2000	72,048	2,115	84,327	2,934

Source: Sedway/Cooke

Employment Projections

Employment projections for Lake County were derived from an analysis of historical employment trends. Between the years 1976 and 1980, the County experienced an annual employment growth rate of 5 percent, with an average of 400 new jobs created per year. The labor participation rate (the proportion of the County's population that is actively employed) in 1980 was 37 percent. Prospects for new employment in Lake County depend on growth of existing basic industries (industries that produce goods locally for export), development of new industries, and increase in the retail and service sectors to meet the demands of both permanent and visitor population.

The low employment projection, corresponding with the low population projection presented, assumes a slightly higher labor participation rate than the 1980 rate (the projected rate being 40 percent) and a continuation of the annual employment growth rate of slightly more than 5 percent over the next 20 years). This results in a projection of nearly 27,700 employees. The high employment projection assumes the same labor participation rate as the low projection, 40 percent, but an annual employment increase of slightly more than 7 percent per year over the next 20 years. Accordingly, nearly 32,600 employees are projected for the County in the year 2000. The projections of employment for the two growth projections are shown in Table IV-3.

TABLE IV-3: LAKE COUNTY EMPLOYMENT PROJECTIONS, 1980-2000

<u>Year</u>	Low Growth Projection		High Growth Projection	
	<u>Labor Force</u>	<u>Average Annual Growth In Jobs</u>	<u>Labor Force</u>	<u>Average Annual Growth In Jobs</u>
1980	13,350	-	13,350	-
1985	16,020	534	16,688	668
1990	19,224	641	20,860	834
2000	27,683	846	32,594	1,173

Source: 1980 estimate by Employment Development Department;
Projections by Sedway/Cooke

The composition of employment is not expected to change much under either projection. Retail trade, services, and government will each account for 20-25 percent of the County's wage earners. The only other sizeable sector is natural resource production (including agriculture, forestry, and fishing) with about 15 percent of the salaried employment force. Some growth is anticipated in the construction industry because of growth in the residential and commercial sectors and because of geothermal development. In addition to the above wage and salary earners, it is expected farmers, self-employed, and unpaid family workers will add another 3,000 workers to the County's labor force. (Further details are available in the appendix on population, employment, and housing.)

LAND USE

Land Use Characteristics

Rapid growth and land subdivisions occurred in Lake County during the 1920's and again in the 1960's as part of the boom in recreation development that swept the country. Nevertheless, the overwhelming majority of Lake County lies in a natural state and approximately half lies on public lands. A mere 9 percent of the County's total area is actually "used." Most of the population is scattered around Clear Lake in small settlements. The primary urban concentrations lie within the County's two incorporated cities, Lakeport at the west end and Clearlake at the southeast end.

The predominant land uses in the County are agriculture and rangeland. Many of the areas with high agricultural productivity (soils Classes I and II) are already being intensively cultivated. The two major agricultural areas are Scotts Valley, to the west of Lakeport, and Big Valley, a few miles to

the southeast. Substantial agricultural activities are also conducted in the following valleys: Collayomi, Long, Coyote, Little High, Jerusalem, Morgan, Excelsior, Burns, High, Bachelor, Middle Creek, and Clover (see Figure IV-6).

Together, lands in agricultural production account for 35,785 acres. Improved rangeland and livestock cover extensive areas in the western, eastern, and southern portions of the County. These lands, generally remote from urban development, total 73,600 acres.

Recreational areas are found throughout the County — around the lakes, in the mountains, and in numerous public forests and parks. Naturally, the focus of attention is Clear Lake, long renown for water-related recreation such as boating, fishing, and water skiing. Numerous communities, Lucerne and Nice for example, offer resort accommodations for tourists. To the south along Highway 175, a string of resorts and inns were developed to bring tourists to the scenic area of Cobb Mountain. The area features hot springs, in addition to peace and relaxation. Many of these areas, which were sites for second home development, are now being converted to year-round use. Mendocino National Forest, Cow Mountain, Walker Ridge, Boggs Mountain State Forest are a few examples of the diverse and plentiful opportunities for outdoor recreation found within the County.

Industrial activities include gravel extraction, rock crushing plants, rock quarries, fruit processing, timber production, and mineral processing. These activities account for very little of the County's land use. The lack of a transportation network connecting the County with outside markets has inhibited industrial development. The one area that is growing significantly is geothermal development. Extensive development in the southwestern portion of the designated Known Geothermal Resource Area is occurring now.

Figure IV-6 presents a generalized picture of existing land uses, and Table IV-4 shows the approximate acreages devoted to each use.

Landownership

Nearly 50 percent, or about 407,500 acres, of the County's total area is publicly owned. The Mendocino National Forest accounts for roughly 60 percent of the public lands. Other major land managers of publicly-owned lands include the U.S. Bureau of Land Management, the California Department of Park and Recreation, and the California Department of Forestry. Quasi-public groups such as Yolo County Flood Control District and Pacific, Gas & Electric also have large land holdings in the County. Table IV-5 shows the distribution of land by ownership.

TABLE IV-4
LAKE COUNTY EXISTING LAND USES, 1980*

<u>Land Use</u>	<u>Acreage</u>
Agriculture field, row and feed crops, orchards, vineyards	35,785
Intensive Livestock feed lots, irrigated permanent pasture	4,306
Improved Rangeland commercial grazing land	73,603
Quarries mineral extraction areas	893
Concentrated Residential single-family residences, multifamily units, mobile home parks in an intensive development pattern (approximate densities would be greater than 1 dwelling unit per acre)	8,331
Dispersed Residential semi-rural and rural development pattern (approximate densities more than 1 acre per dwelling unit)	1,703
Commercial/Industrial retail sales, services, and manufacturing	141
Airfields airports	298
Other Urban uses not covered by the above categories including, for example, golf courses, cemeteries, the U.S. Army Radio Receivers.	2,248
 TOTAL	 127,308

*Excludes northern third of the County (that portion of Figure IV-6 marked by diagonal lines).

Source: Measurements by Sedway/Cooke from a map prepared by the Lake County Farm Bureau, 1980.

TABLE IV-5
LAKE COUNTY LANDOWNERSHIP

	<u>Acreage</u>	<u>Percentage of Total</u>
Private	449,867	52.5
Federal		
National Forests ¹	247,271	28.8
Public Domain ²	123,035	14.4
Other	8,976	1.0
State	7,359	<1.0
County	2,760	<1.0
Other public & quasi-public	<u>18,062</u>	<u>2.1</u>
Public Total	407,464 ³	48.3
Total	857,330	100.0

¹National Forests are managed by the U.S. Forest Service.

²Public domain lands are managed by the Bureau of Land Management.

³Figures do not add because of independent rounding.

Source: Lake County Assessor, 1980.

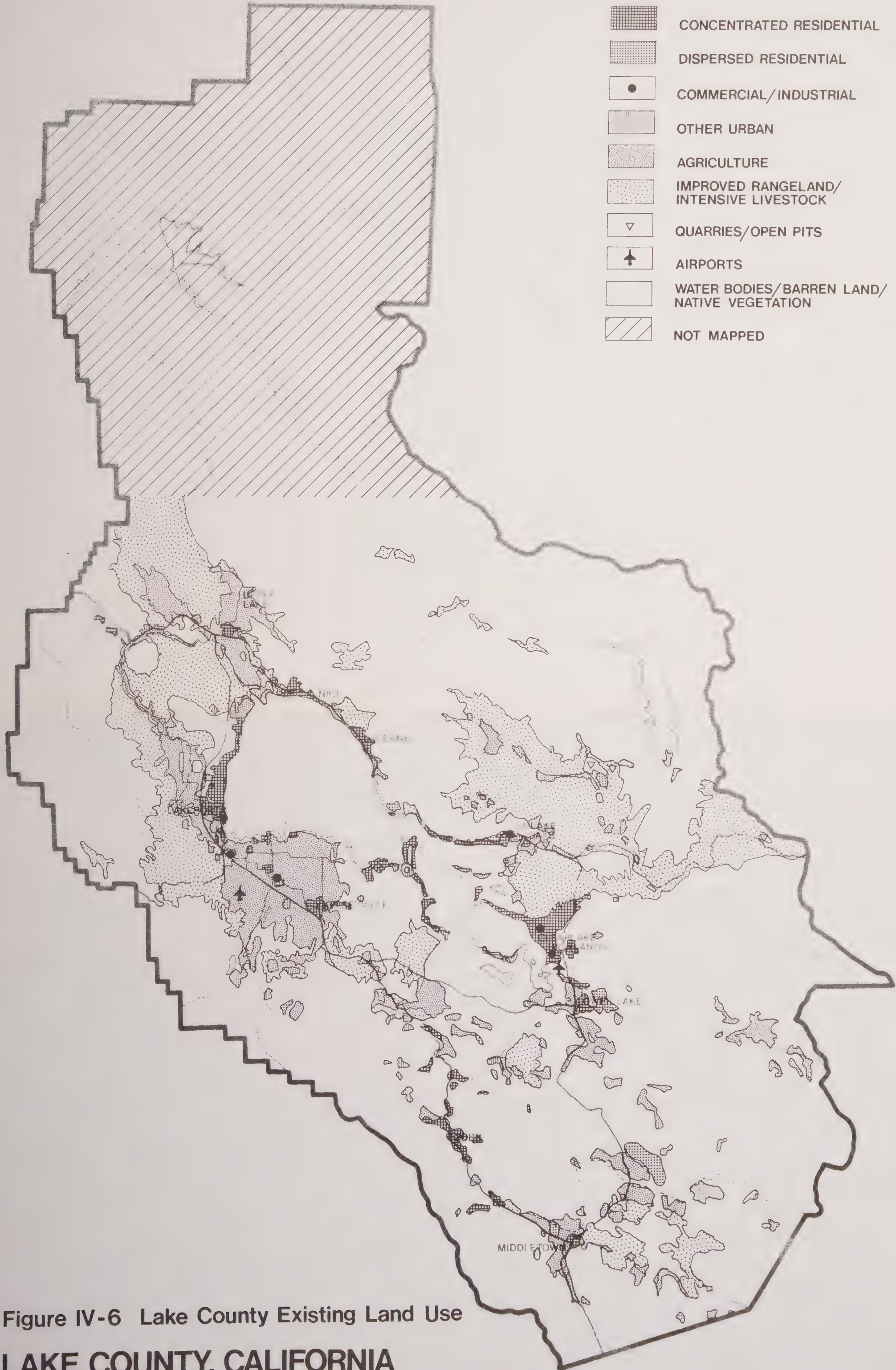


Figure IV-6 Lake County Existing Land Use

LAKE COUNTY, CALIFORNIA

This map shows generalized data
Detailed maps are on file with the
Lake County Planning Department.

0 10,000 20,000 feet

Sedway/Cooke



Objectives and Policies

The discussion of land uses covers the following policy areas:

1. Land Use Classifications
2. Residential Development
3. Commercial Development
4. Industrial Development
5. Resort Development

I. To establish a generalized set of land use designations that will best utilize the County's resources, and to describe them in sufficient detail to guide future land use and zoning decisions.

The Land Use Plan in Figure IV-8 is a general spatial distribution of the land use categories described below. The Land Use Plan is only a generalized interpretation of the written policies. Some land use categories are not shown on Figure IV-8 because of their localized nature. For these categories, the appropriate distribution is to follow the written guidelines. Densities are defined in terms of gross acres including residential land, shopping for neighborhood residential needs, schools, parks and private recreational areas, utility buildings, easements serving the residential needs, on site streets and half of bordering streets.

The definition of gross acre does not include an area used for shopping that serves a regional need, industry, State Highways and Freeways, land lakeward of zero Rumsey, streams, canals and drainage channels. For example, at a density of 10 dwelling units per gross acre, 1000 units would be permitted on a 100 acre site. Development of the site may include roads, grocery stores, and a small park, which together may require 30 acres. As a result, the 1000 permitted units will actually be sited on 70 acres of residential land. The "net residential density" is 1000 units/70 acres or about 14 dwelling units per "net" acre.

I.1 Urban Residential¹

Description. This land use category is designed to establish areas suitable for intensive residential development and necessary accessory uses. It allows a wide range of living accommodations from conventional single-family units and mobile homes to townhouses to apartment buildings. Building intensity would vary with location. Townhouses and apartment buildings would be more appropriate adjacent to parks and other open spaces, near existing and potential transit lines, along major transportation routes, and near activity centers such as recreational centers, libraries, shopping centers, and entertainment areas.

¹Also see support policy found in Objective #2 on residential development located in this section.

Density. 1-20 dwelling units per gross acre. Proposed developments of twenty units per gross acre shall be subject to the planned development process.

1.2 Suburban Residential

Description. This land use category is designed to establish areas suitable for single-family residences at relatively low densities. It is appropriate where the traditional neighborhood character of single-family units prevail and where the level of services including roads, shopping, and recreation do not justify higher densities.

Density. 1-4 dwelling units per gross acre.

1.3 Suburban Residential Reserve

Description. This designation would be able to serve as a transitional designation between Suburban and Rural Residential but due to soil and slope characteristics, generally larger than 1 acre lots minimum are necessary. This designation would necessitate using a land capacity/capability or soil slope ordinance to allow flexibility during implementation. Where found in mountain areas, this designation would temporarily serve to limit densities until the establishment of appropriate infrastructure to support higher densities. See cluster policy 1.6 for added density flexibility including potential density bonus entitlements.

Density. 1 dwelling unit per gross acre minimum.

- When areas in this designation are identified as primary recharge areas for a community's water system, acreage minimums should not be below 2 acres.
- Areas with 30% or greater slopes should have acreage minimums in excess of 3 gross acres, and if identified as a moderate-to-high landslide risk area, a 5 gross acre minimum.
- A soil/slope ordinance will identify exceptions to these policies due to innovative technology or specific site investigation. (See the Implementation Chapter for overview of land capacity policy.)
- When reviewing land divisions, special consideration should be shown that sizes and shapes will not compromise future land divisions.

1.4 Rural Residential

Description. This land use category is designed to provide single-family residential development in a semi-rural setting. Large lot residential development with small-scale agricultural activities is appropriate. These areas should be used as a buffer area

between the urban/suburban residential development and the agricultural areas of the County. Building intensity should be greater where public services such as major roads, community water systems, or public sewerage are available. However, most of the lands designated for this land use category would have wells and septic systems. Typical uses permitted by right include, but are not limited to, single family residences; crop production; raising of poultry, rabbits, and other small animals for domestic use; raising of bovine animals, horses, sheep and goats for domestic use; and sale of crops produced on the premises. Typical uses permitted conditionally include but are not limited to agricultural-related services, and recreational facilities.

Density. 1 dwelling unit per 5-20 gross acres.

- Areas which qualify for minimum densities less than a 10 acre minimum, must meet the following characteristics (unless cluster policy and a land capacity ordinance is used):
 - access via an improved County roadway
 - average slopes must be below a 30% grade
 - areas not identified as a moderate-to-high landslide hazard area (special study zones).
- Locations adjacent to improved County road intersections may warrant a 25% reduction of parcel size.

1.5 Rural Lands

Description. The purpose of this land use category is to allow rural development in areas that have limited agricultural potential and remain for the most part in their natural state. This category is appropriate for areas that are remote, or characterized by steep topography, fire hazards, and limited access. Typical uses permitted by right include, but are not limited to, animal raising, crop production, transmission facilities, single family residences, game preserves and fisheries. Other typical uses permitted conditionally include, but are not limited to, recreational facilities, manufacturing and processing operations, mining, and airfields.

Density. Minimum lot size is 20 acres.

- Minimum densities or parcel sizes (except via cluster policy), should be increased when distances are greater than 5 air miles from a designated community. (Designated communities include City of Clearlake, Kelseyville, Lower Lake, Lakeport, Lucerne, Cobb, Clearlake Oaks, Nice, Upper Lake & Middletown.)
- Road intersections may warrant a 25% reduction in parcel size if located adjacent to a County maintained roadway.

- Acreage minimums should be in excess of 40 acres if average slope exceeds 30%, especially in areas identified as being special study zones in the Seismic Safety Element.

1.6 Cluster Development Policy

Description. Residential and rural densities may not be clustered except by special use permit or by the "P-D" process and condominium provisions in state and local regulations. General Plan Land Use designations and corresponding policy shall apply in concert with a soils/slope land capacity ordinance consistent with policy outlined in the Implementation Chapter of this plan. Densities may increase using the following general policy:

- Higher density entitlement where a development: 1) exhibits design innovations including solar and geothermal energy techniques, scenic controls or design innovations, 2) provides below market home ownership opportunities or is otherwise included in a low and moderate income housing project, densities may be increased using the following sliding scale due to public safety response time concerns:
 - 5 miles or greater from a community center, a possible 10% entitlement
 - less than 5 miles, a 20% entitlement
 - 2 miles or less, up to a 25% entitlement.

Where entitlements are granted using these policies provisions, the remaining common, open space or separate use site must be reinforced by one of the following measures approved during the "P-D" process (5 acre min.), Agricultural Preserve contract, TPZ provisions, open space easements or zoning, CC & R's deed restrictions, dedication of fee or partial fee title to a public or quasi-public agency (includes lake access). If entitlements are met by providing below market housing opportunities consistent with the housing elements goals and implementation program, the provisions of this subsection may not apply.

- An additional density entitlement for areas designated as resource conservation and timber production zones of 10% if an improved government maintained road is available within 1/4 mile and the project can be determined not to compromise the identified resource.
- The cluster development policy shall not apply to the following General Plan designations: Intensive Agriculture, Heavy Commercial/Industrial, and the Urban Residential designations.

1.7 Local Commercial¹

Description. The purpose of this land use category is to establish areas for small, localized retail, recreational, and service businesses which provide goods and merchandise to the immediate surrounding land uses. Convenience facilities may include eating and drinking establishments; food and beverage retail sales; limited personal, medical, professional and repair services; and retail sales. Such facilities may range from a single use to a cluster of uses.

Building Intensity. The Floor Area Ratio (FAR) should range from 0.25 to 0.2 (3) (FAR is defined as the relationship between total floor area and land area). Table IV-6 contains a matrix of building intensities. For example, the FAR .025 times the 43,560 square feet in an acre equals 1,089 square feet of floor per acre. Figure IV-6 illustrates how the FAR operates.

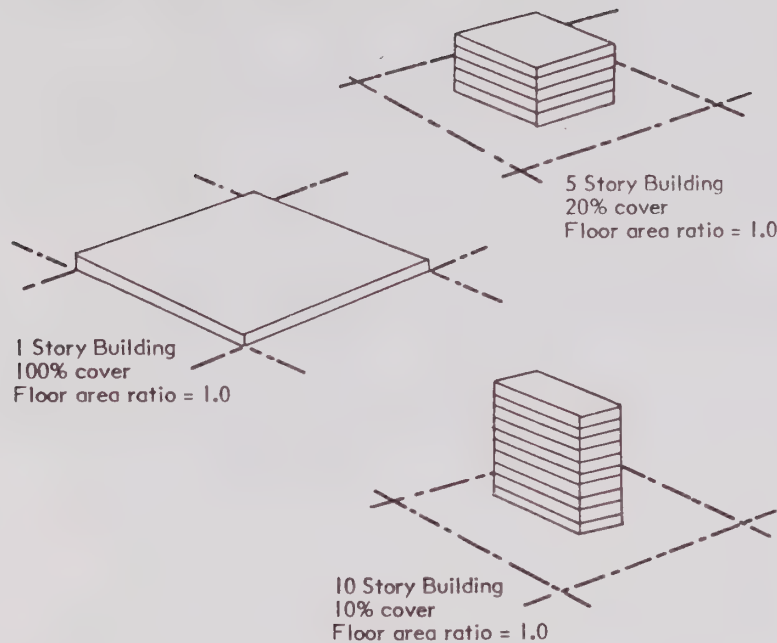
TABLE IV-6

BUILDING INTENSITY USING FAR

<u>Floor Area Ratio (FAR)</u>	<u>Floor Area Per Gross Acre (Square Feet)</u>
.025	1,089
.05	2,178
.1	4,356
.2	8,712
.4	17,424
.8	34,848
1.0	43,560
1.2	52,272

¹ Also see policies in Section #3, Commercial Development.

Figure IV-7
FLOOR AREA RATIOS



Source: Planning Design Criteria, DeChiara Koppelman

1.8 Community Commercial

Description. The purpose of this land use category is to provide a full range commercial retail and service establishments to communities. These districts should satisfy a variety of personal needs as well as those of nearby businesses. Typical uses that would be permitted include but are not limited to, gasoline service stations, hardware stores, eating and drinking establishments, food and beverage sales, public buildings, general merchandise stores, professional offices, and finance offices. This land use category would be appropriate in resort/recreation areas and in agricultural areas where they would include agricultural supply and commodities sales, farm equipment repair, rental and sale water-well drilling services, veterinary services, and other agricultural-related services, as well as those permitted used identified above.

Building Intensity. The Floor Area Ratio should range from 0.2 to 1.2.

1.9 Service Commercial

Description. The purpose of this land use category is to provide areas suitable for heavier commercial uses around major urban concentrations. Typical uses that would be permitted include,

but are not limited to, automotive-related or heavy equipment sales and services, building maintenance services, construction sales and services, and warehousing.

Building Intensity. The Floor Area Ratio should range from .05 to 1.0.

1.10 Industrial/Heavy Commercial

Description. To provide for a range of "light" manufacturing, distribution, and storage activities. Intensive or heavy commercial activities permitted would include, but not be limited to: canneries, wineries, lumber yards, printing/publishing facilities, stone products, specialty craft shop (i.e. jewelry), machine/carpentry and plumbing shops, trucking terminals, warehousing and airports.

Building Intensity. The Floor Area Ratio should range from 0.1 to 1.5. The minimum parcel size could range from 10,000 sq. ft. to 1 acre, depending on the availability of community sewer and water service.

- **Guidelines for Industrial/Heavy Commercial Development**

Only a few industrial sites have been geographically identified on the Land Use Map. The County's intent is to include a flexible floating designation whereby a special use permit is required, along with a zoning request, which meets a set of policy criteria. This is done to allow more site location flexibility to promote local economic development, while ensuring that adequate infrastructure and performance standards are available. In order to promote a zoning proposal, a design proposal for development must be included with the request. Through the use of a "special zoning exception"¹, conditional term approvals of appropriate sites will be available, thereby discouraging speculative rezonings and reducing conflicts between commercial, residential and industrial development. This policy is designed to prevent or keep potential industrial sites from compromising residential development options and policies promoted in the Housing Element.

Mineral and gravel resource extraction activities are not designated on the Land Use Map. Resource processing activities are subject to these policies, with the exception of Geothermal Direct Heat or steam energy production.

¹Special Zoning Exception: A type of ordinance designed to only grant a use permit until a project is activated, thereby a formal zone change is adopted. Usually, approval has a fixed term similar to a use permit: 2 year, 5 year, etc., unless activated. (Properties designated Industrial or Heavy Commercial in the Land Use Map should not be subject to this system.)

Policies for resource extraction can be found in Chapter V under the Mineral Resources Section and in the Geothermal Element.

- Criteria which must be met for zoning proposals.
 1. Appropriate industrial sites will not result in significant harmful impacts to adjacent land uses. In addition, sites should be designed to prevent the intrusion of incompatible uses into industrial areas. In any case, industrial use shall not be within 1000 feet of: schools, high water line of Clear Lake, the 100 Year Flood Plain, Resource Conservation Districts, known aquifer recharge areas, and multi-family residential development of 10 units or more. Areas designated industrial on the Land Use Map are not subject to the above distance criteria.
 2. Warehousing may be considered despite the criteria in #1 within sewer and water districts which are reasonably consistent with the General Plan, or outside districts if criteria #6 is met.
 3. Development shall be located where access is on collector roads (or within 1/4 mile), and where industrial traffic is not routed through residential or other areas with uses not compatible with industrial traffic.
 4. Areas must be physically suited to industrial activities, with slopes not to exceed 20%.
 5. Industrial development of 5 acres or more must be designed under the Planned Development concept, with unified landscaping, signage, building design, infrastructure, and circulation standards included. Within these developments, other support facilities may be appropriate.
 6. When considering appropriate locations for the industrial category outside urban service boundaries, such areas should be located along collector roadways and where residential or long-term agricultural uses are compatible. Such areas shall also provide private, on-site water supply and sewage disposal systems.

Density. The actual allowable parcel size will be based on the characteristics of the site and the site vicinity, as determined by the land capability/capacity ordinance. As a general rule, density may be increased for sites adjacent to airports, with 1 acre site minimums outside sewer and water districts.

1.11 Resource Conservation

Description. The purpose of this land use category is to assure the maintenance or sustained production of natural resources within the County. This category would include public and private areas of: significant plant or animal habitats, forest lands in Timberland Preserve Zones, agricultural lands within the Williamson Act, watersheds, outdoor parks and recreation, and areas which require special attention because of hazardous or special conditions. While a separate resource conservation designation is not included on the Land Use Plan Map, Figure IV-8, Critical Resource and Conservation areas are designated on Figures IV-16, V-3, V-6, and V-8. However, as Critical Resource Conservation areas require special attention wherever they occur, ongoing review and revisions will be needed to identify and protect Critical Resource areas. Compatible uses may include: single-family dwelling units, cultivation and harvesting of crops, grazing of livestock, recreation, and mineral extraction.

Density. Generally, low intensity multiple/open space land uses are designated. However, in areas where existing or expanded development may occur, planned developments must be prepared for these lands where adverse impacts are expected, to insure that the impacts of development for the resource are minimized. Guidelines to be observed are described in the Resource Management and Conservation Plan (Chapter V). Cluster policy is encouraged with residential land divisions, using the rural designation policy and the land capacity policy outlined in the Implementation Chapter of this plan. The planned development policy should not apply for a single family dwelling per legal lot of record, which would be specified in the appropriate conservation zone (TPZ, Primary Flood Plain, Intensive Agriculture, etc.).

1.12 Agricultural

Description. The purpose of this land use category is to protect the County's valuable agricultural resources and to prevent development that would preclude their future use in agriculture. These lands are actively or potentially actively engaged in crop production, including horticulture, tree crops, and row and field crops. Lands with soils Classes I-IV are designated where agricultural uses are most appropriate. Uses compatible with this category are limited to agricultural-related activities. Geothermal applications for the production and processing of agricultural products would be considered an agricultural-related activity. Wineries and the processing of local agricultural products such as pears and walnuts are encouraged within this designation.

Density. 40 acre minimums.

- If a site area can be shown through qualified testing and upon consultation with the Soil and Conservation Service,

that a site area of greater than 20 acres is not within a Class I-IV soil, then areas identified may be considered as Rural Lands for policy determinations and appropriate zoning.

I.13 Public Lands

Description. This land use category includes only public owned lands, including but not limited to lands administered by the U.S. Forest Service, the U.S. Bureau of Land Management, the State of California, and by Lake County. These lands are generally managed under a multiple use concept allowing many open space activities such as recreation, mining, forestry, and grazing. These lands, however, are not totally excluded from development but may be considered through the Planned Development, "P-D" process, and policy outlined in the Rural Lands designation and cluster policy. (The P-D process should not apply for one single family dwelling per legal lot of record.)

I.14 Public Facilities

Description. This land use category establishes areas for services and facilities which are necessary to the welfare of the community. Typical uses include parks, schools, civic centers, hospitals, liquid and solid waste disposal sites, cemeteries, and public utility facilities. These designations do not preclude future facilities from being located outside noted locations. These facilities are designated public lands on the Land Use Map.

I.15 Resorts

Description. This land use designation identifies areas where commercial and cluster residential development are beneficially mixed, often located near hot springs, in mountain and lake water areas. These locations have physical, geographic, resource, scenic, or economic attributes which need special consideration through the establishment of a local area plan. The intent of these local area plans is not to constrain existing developments, but to establish a generalized plan basis for future discretionary and non-discretionary permits with policies sensitive to the local character and needs. Areas designated on the Land Use Map are not intended to restrict other site areas. Local commercial and cluster policies also apply within areas considered for this designation.

Resorts are often short-term destinations which provide an assortment of recreational activities, as well as lodging, dining, and entertainment services, in settings ranging from opulent to primitive. They are aimed at supplying an infinite variety of recreational experiences and include a host of vacation/business destinations, varying from waterside hotels and motels to mountain ranches and health spas. Whether large or small in scale, comprehensively planned or haphazardly built, resorts are established around a primary and usually natural recreational

attraction, a factor which has traditionally made them seasonal in their popularity.

2. To establish guidelines for the location and intensity of residential development.

- 2.1 Existing legal lots of record with a lot size less than the minimum area indicated by the designation on the Land Use Plan should be permitted to develop provided that the lots meet all building, safety, fire and Health Department requirements.
- 2.2 Major new residential development should be located in close proximity to opportunities for employment, recreation and retirement.
- 2.3 Development intensity on Rural Lands should vary according to its susceptibility to natural hazards, access, and slope characteristics. Proposed development may be clustered onto portions of the site that are more suitable to accommodating the development, and should provide access either directly onto a public road or via a privately maintained road designed to meet County road standards.
- 2.4 On lands designated for agricultural use residential uses should be limited to single-family residences and quarters for farm laborers. Divisions into parcels less than the minimum lot size are discouraged, but may be permitted provided that:
 - the parcelized land is not agriculturally productive.
 - an agricultural assessment has been prepared and determined that the proposed use will not have a significant effect on the continued agricultural production of surrounding properties.
 - the development rights on the remaining property are dedicated to agricultural-related activities.

Alternatively, the County may conditionally permit up to two additional dwelling units on the same parcel, provided that they are clustered and that the parcel continue in agricultural production.

- 2.5 On lands designated Resource Conservation in forestry production areas¹, residential development not related to forest production may be permitted, provided it is demonstrated that:
 - they are compatible with forest uses.
 - they will not interfere with forest practices.
 - they consider forest site productivity and minimize the loss of productive forest lands.

¹Timber Preserve sections of the Government Code Section 51100 et seq.

- they will meet standards relating to the availability of fire protection, water supply, and waste disposal.
- 2.6 The County should encourage development to occur as infill development where public services such as water and sewer systems, schools, and roads already exist.
 - 2.7 Building intensities at the lower end of the range would be appropriate to suburban density residential areas. Building intensities at the higher end of the density range are appropriate adjacent to parks and other open spaces, along transit routes, and near activity centers such as recreational facilities, libraries, shopping centers, and entertainment areas.
 - 2.8 High density residential areas (greater than 15 dwelling units per gross acre), in which apartments and townhouses are appropriate, should be encouraged to locate along minor collectors and transit lines, in close proximity to shopping, recreation, and entertainment.
 - 2.9 Where practical, housing should be permitted in commercial areas in order to foster a mixture of compatible uses, reduce travel distances, and create an alternative living environment.
3. **To provide retail and service commercial facilities for the convenience of both residents and tourists.**
 - 3.1 Small neighborhood convenience facilities should be provided to meet the everyday shopping and personal needs of the immediately surrounding land uses. They are appropriate in residential land use categories provided that they do not adversely affect residential uses. The commercial structures should not exceed 15,000 total square feet of floor space.
 - 3.2 Travel-related commercial services such as gasoline service stations, food and beverage sales, eating and drinking establishments and lodging should be located along major collectors and State Highways for the traveling public. Such uses should be located near interchanges and intersections where possible or areas identified as Resort in the Land Use Plan.
 - 3.3 Commercial centers should be provided in residential, resort, and rural communities. Such centers typically range from 15,000 square feet to 50,000 of commercial floor space in either a cluster of uses or within a district. The following guidelines should be observed in the proper development and location of the centers.
 - The market area should serve the community and surrounding areas.
 - A supermarket or small variety store is commonly the major facility.
 - Typical uses include eating and drinking establishments, food and beverage sales, general personal services, repair

services for commonplace household appliances, and retail sales. Other uses such as administrative and professional offices, medical services, and financial, insurance, and real estate services may be included.

- Where the surrounding area is an agricultural area, the center should include goods and services that serve agricultural needs.
- The center should be located where it can be easily accessed from at least one major local road.

3.4 Commercial service businesses such as warehouses, repair services, business support and contract construction services, furniture sales, and building materials sales should be located where they will not adversely affect surrounding properties, typically in areas serving occasional needs rather than day-to-day needs. Commercial service areas should be provided in accordance with the following criteria:

- provide good access to highways or major collectors.
- buffer existing or planned residential areas.
- develop in depth rather than in a strip fashion along the access road to provide adequate room for parking, buffering, etc.
- encourage development as integrated planned areas in conjunction with community commercial areas or with common architectural and site development features.

3.5 By definition, Service Commercial and Community Commercial uses are included within Residential designations. The preparation of commercial land area per gross residential acre would average 25% in urban areas and 3.5% in suburban areas.

4. To establish urban and rural areas suitable for the development of industrial activities, to provide guidelines for their development, and to protect lands with industrial potential from preemption by other uses.

4.1 The County should actively promote the development of a sound and diversified economic base by continuing to promote agriculture, recreation services, and commerce, and by expanding its efforts to encourage industrial development including the development of geothermal resources.

4.2 Industrial and agricultural applications which could directly use geothermal resources as a heat source instead of fossil fuels should be encouraged if properly planned and compatible with surrounding land uses.

5. To establish areas and promote resort development using the mixed use concept by providing special policy for the major Lake County industry.

5.1 Resorts may be considered to include both profit and non-profit, quasi-public, and private developments which have similar use characteristics.

- 5.2 Because of their diversified nature, resorts can be appropriate in residential and commercial land use categories. Mixed use resorts should be developed by special use permit utilizing the cluster and land capability/capacity concepts, thereby promoting fewer vehicle access points while enhancing visual and pedestrian access. The special permit process will add flexibility to potential locations for resorts, while preserving the opportunity to ensure land suitability and compatibility with surrounding land uses.
- 6. **To establish and maintain an acceptable level of service and minimize costs and to provide criteria for determining the location, intensity and timing of future public service development.**
 - 6.1 General public service facilities and buildings such as government facilities, libraries, and community halls, should be situated near the center of general community activity.
 - 6.2 Fire and police stations should be sited to enable minimum acceptable response time to service calls.
 - 6.3 When feasible, public facilities should be located along major thoroughfares.

Figure IV-8
LAND USE PLAN
(See Appendix A)

Overview of Areas Designated on the Land Use Map

Background

Land suitable for residential development in Lake County has been determined by analyzing a number of factors which either present opportunities or constrain development potential. The factors used in the initial analysis included hazards, both natural and man-made, and natural resources. The Introduction to the Resource Management and Conservation plan outlines this initial analysis used to identify areas most suitable for development centering on physical/natural resource constraints.

The second analysis considered the availability of areas naturally suited to the extension of public services and infrastructure. General cost and issues involved with extending services to outlying areas were included in this review. Table IV-7 shows the results of this analysis at a sub/study area level. (See the "Public Facilities and Services" working paper discussion in the General Plan Technical Appendices.)

The third analysis included a review of existing land divisions and lot sizes along with existing development patterns throughout the County. During this review, an effort was made to identify areas having existing characteristics which may have needed special policy considerations or attention to ensure that the land use densities considered for the area would not be in conflict with the area's use character.

These three phases resulted in a Preliminary Draft General Plan which was reviewed by both the general public and public agencies. Follow up analysis was then undertaken, resulting in separate public hearings for each of seven different geographic areas of the County. During these hearings, three alternatives for development were explored (see Alternatives Working Paper), along with a Planning staff alternative. This fourth alternative was a mixture of the initial three alternatives and follow up studies and analysis. The analysis revealed large land areas of moderate and high development suitability. In total, 37,080 acres of vacant land have a high development suitability and 77,520 acres have a medium development suitability.

As a result of hearings and studies, the Land Use Map projects 1600 acres for Urban development, almost 14,000 acres for Suburban, and approximately 11,100 acres in a Suburban Reserve category. The Plan also designates 46,000 acres in a Rural Residential designation (see Table IV-8).

Commercial areas are not always noted on the Land Use Map due both to scaling and locational issues. Urban designations include the assumption that an average minimum of 25% of the Urban areas will be in community or service commercial development. For Suburban areas, 3.5% is assumed. These built in assumptions do not include local or neighborhood commercial needs. The Plan promotes more than 1000 acres for community and service commercial development within the residential designations. (See Table IV-7 footnotes for more information.)

TABLE IV-7

PROPOSED DWELLING UNITS BY COMMUNITY AREAS*

	<u>I¹</u> <u>Dwelling Units/</u> <u>Population</u>	<u>II²</u> <u>Dwelling</u> <u>Units</u>	<u>III³</u> <u>Dwelling Units/</u> <u>Population</u>
Unincorp. City of Clearlake	194/447	290	834/1,918
Clearlake Oaks	1,183/2,731	1,809	97/223
Hidden Valley	2,552/5,869	3,809	NA
Kelseyville	1,103/2,538	1,492	590/1,356
Lower Lake	1,070/2,462	1,630	589/1,354
Unincorp. City of Lakeport	2,910/6,692	4,342	1,842/4,237
Lucerne	1,274/2,931	1,902	99/227
Middletown	786/1,808	1,061	351/807
Guenoc	246/566	368	1,118/2,571
Nice	1,099/2,528	1,670	81/187
Upper Lake	598/1,375	807	250/574
Buckingham, Soda Bay & Rivas	5,335/12,271	8,206	632/1,454
Cobb Mountain Areas	193/443	288	793/1,825

- 1 I = without vacant units and second home dwellings.
 2 II = with second home and vacancy rate build-out.
 3 III = conveys the Suburban Reserve conversion and increase which should be added to I or II for totals. Also see c) and f) below.

* The above housing figures were tabulated using acreages with the following assumptions for each individual community:

- a) Land necessary for commercial, public facilities, industrial, and streets and roads has been removed representing the following percentages:

	<u>Urban (U)</u>	<u>Suburban (S)</u>	<u>Suburban</u> <u>Reserve (SR)</u>
Kelseyville, Middletown & Upper Lake	53%	22%	2%
Lower Lake, Clearlake Oaks, Nice & Lucerne	56%	23%	2%
Unincorp. Areas of Lakeport & Clearlake	34%	24%	2%
All Other Areas	-	22%	2%

- b) A certain percentage of the land designated will always be vacant. That percentage was removed as follows: U 15%, S 33%, and SR 33%.
- c) A particular net density will characterize the area minus a) and b) for the designations as follows: U - 7 dwelling units per acre (du/A), S - 4 du/A, SR - .5 du/A. Exceptions: 1) Buckingham, Soda Bay, and Rivas - the density multiplier for Suburban is reduced to 3 du/A due to extensive existing subdivided lots not necessitating public sewer system; and 2) Cobb Mountain Areas - a lower conversion rate for Suburban Reserve to Suburban is used due to existence of extensive subdivided lands and rough terrain.
- d) A certain percentage of the dwelling units will be vacant, either as second vacation home stock or as a normal vacancy rate. That percentage used was as follows:
 - Kelseyville, Middletown & Upper Lake - U 19%, second home & 5% normal vacancy; S 21% & 5%, respectively; SR 28% & 5%, respectively.
 - Lower Lake, Clearlake Oaks, Nice, Lucerne - U 28% & 5%, S 28% & 5%, SR 33%.
 - All other areas - S 28% & 5%, SR 28% & 5%.
- e) These figures do not include the present incorporated city limits of Clearlake and Lakeport, even though these communities are expected to expand into adjacent areas. Assumes Year 2000 population within present boundaries of Lakeport = 8,543; Clearlake = 18,417.
- f) Areas that are denoted with a dot pattern on the Land Use Map are not included in the Suburban Reserve counts.

These are the assumptions used as factors to determine gross versus net population and number of housing units. See next section, Discussion of Absorption Capacity versus Holding Capacity.

TABLE IV-8

PROPOSED RESIDENTIAL LAND USES AND ACREAGES

<u>General Plan Designation</u>	<u>Acres</u>
Urban	1,525
Suburban	13,727
Suburban Reserve*	11,079
Rural Residential	46,000

- * Includes both restricted or non-convertible and convertible Suburban Reserve lands, Planned Developments, etc.
-

Methodology Used to Determine Land Necessary for Development

The County expects a yearly growth rate of 6.6%, or a year 2000 population of 84,327 persons (see earlier discussion). To determine the amount of land necessary for this population and how it would be distributed in various policy densities, other assumptions were necessary. The following are those assumptions:

- Existing lot sizes and use patterns should be respected and serve as a base for density designations and expansive growth.

This was accomplished by first identifying areas which have been significantly compromised due to existing development, lot sizes, etc. Review of these areas and their potential for growth versus natural physical and public service constraints, resulted in the Land Capacity implementation policy and the constrained Suburban Reserve concept (see Implementation Chapter).

- Lake County must preserve and continue to foster its rural resort character.

This value assumption promoted non-urban densities for significant areas of the County. The two designations of Suburban Reserve and Rural Residential reflect this value assumption by promoting lot size averages of 2 acres for the Reserve and 10 acres for Rural Residential. Over 79% of the land area in the Rural/Urban Residential designations promotes this character value.

- The County will continue to have a significant proportion of its housing stock used for second home or vacation home development.

Preliminary 1980 census information noted that 28% of the County's housing stock was not occupied by local residents but served as either a second home or vacation home for seasonal use. The continuation of this characteristic necessitated calculating a formula for land use, not tied simply to a projected population but, rather, projected housing densities including a realistic necessary vacancy rate to ensure availability. Table IV-7 reflects these among other factors.

- An absorption capacity formula sensitive to the County's different communities can serve as an appropriate gross land area indicator for development.

To determine the net land area necessary versus gross area for the County's population, an adjusted absorption capacity formula was developed. The formula was designed to include such Lake County characteristics as 28% of the future housing stock being vacation homes for non-County residents and up to a 33% long term land and 5% housing vacancy rate, along with other factors such as extensively subdivided areas which are unusable or undevelopable.

For the purposes of using population figures in this Plan and designated densities on the Land Use Map, absorption capacity was defined as the projected population that would result from past growth trends as an

indication of gross land area needs, with additional adjustments for individual community characteristics. In reality, without using an adjusted absorption capacity rate for individual communities, the Land Use Map would infer a maximum build out population which would be unrealistic. Even with an adjusted rate, it must be remembered that most existing development will not be removed and replaced at maximum density, new development would not always occur to its maximum potential, and necessary services may not be available to support maximum density.

Example of Unadjusted Absorption Capacity:

Gross Land Area = 1000 acres

General Plan Designation = "Urban" up to 20 dwelling units
per acre

Areas Considered Non-residential (Gross Land Area in Use):

Commercial development	= 25% of area	= 250 acres
Industrial uses	= 5% of area	= 50 acres
Public facility uses	= 5% of area	= 50 acres
Streets and roads	= 18% of area	= 180 acres
<hr/> Total Non-Residential Area		= 470 acres

Area in Vacant Land Not in Use = 15% = 70.5 acres
(If gross area considered would
equal 7%)

Net = 399.5 acres

Average Unit Density Per Net Area in Residential Use = 7 units
Total = 2796.5 units

Units Not Occupied on a Permanent Basis = 33% = 922.85

Vacation homes (28%)

Vacancy rate (5%)

Net Occupied Units = 1873.65

Average Household Size = 2.3 persons x net occupied units = 4309.40
persons

The first assumption served as a base indicator for land use designations and densities from which adjustments were made using areas identified in the land suitability analysis for natural community growth. As a result, communities in areas were not projected out to an ideal population but evaluated during the hearing process for logical expansion reflecting many of the residents' hopes and expectations for their community. This was done as the result of over twelve public hearings for the seven different County study areas.

Table IV-7 identifies the results for various communities in the County, using an adjusted absorption capacity rate (AACR) from that above. In the

table's footnotes, it can be noted that communities were grouped by common land use character so that different adjusted rates could be used. Also in the footnotes, additional factors such as adjustments for significantly divided areas were noted. Table IV-7 illustrates the net population and dwelling unit density per net acre for different residential designations. Some community areas, for example, Buckingham/Soda Bay and Hidden Valley, are either totally or substantially subdivided; therefore, expected permanent population counts reflect an adjusted density reflecting existing lot sizes. (Refer to the note at the end of this section for a discussion of changes from the preliminary Land Use Map proposed by Sedway/Cooke consultants.)

Brief Discussion of Various Community Areas

The community areas listed in Table IV-7 are discussed here to provide a general overview of their residential designations as exhibited on the Land Use Map. (More specific policy may be found in the Implementation Chapter.)

Lakeport Area. The Land Use Map promotes growth to the southwest and north towards the Nice-Lucerne Cutoff. The approximate western boundary for Suburban/Reserve and Urban development is Highway 29 and Riggs Road. These areas were designated for residential development due to it being a logical service extension of water and sewer lines, and due to extensive subdividing throughout the area. The area west of Lakeport within Reserve is dominated by existing 5 acre or less lots.

Areas designated for Rural Residential were intended to both add a Rural density buffer and transition zone between Intensive Agriculture and Residential densities. Designated areas above the Scotts Valley are located within the foothills in order not to intrude on prime agricultural lands.

Lakeshore Boulevard is the major shoreline transportation corridor north of the city and is often seriously congested. All development proposals north should be evaluated with special traffic sensitivity so as not to further aggravate congestion in this area, by reducing access points and, where possible, widening Lakeshore Boulevard. The City of Lakeport should be encouraged to annex that area south of Park Way due to it being a logical service and administrative unit. Proposals for converting reserve lands to the southwest should be discouraged until the areas are ready for annexation to the City of Lakeport. The unincorporated area allows an additional 6692 persons* in the Suburban Reserve designation. The area north of Park Way may be appropriate for forming a special district for services due to the large number of new development proposals. Conversion of the reserve areas to higher densities is discouraged until major sewer plant expansions occur and the County's adoption of a Master Water Plan.

*Unincorporated population - the City of Lakeport projection for the year 2000 is 8,543 persons. Growth for the city will be into designated residential areas.

Upper Lake/Lake Pillsbury Area. Land Use Map proposals for this area promote Suburban and Rural Residential densities to the east along the north and east side of Highway 20. These areas were so designated due to Highway 20 being the natural corridor for sewer service for the community of Upper Lake. Areas with Class I-IV soils were not designated for residential densities unless existing lot sizes were below 5 acres. Highway 20 was chosen as a natural divider.

Those areas designated Suburban Reserve may add an additional 441 persons. Expansion of sewer lines from the NW Lakeport Sewerage Treatment Plant is required prior to an area designated Suburban Reserve developing to a suburban density. Due to the importance of Highway 20 as a major traffic corridor, a frontage road east of the community should be considered when reviewing development proposals so as to reduce access/traffic conflicts and hazards.

The Lake Pillsbury area has no separate identified community areas designated Suburban. Suburban Reserve designations reflect acreages of less than 5 acres. No Class-IV soils have been identified in this area.

Nice Area. This community is bordered on the north by steep slopes and is characterized by a resort atmosphere. In the past, extensive slope areas have been subdivided into small lots without facilities and roads being developed. These lots are primarily designated Suburban Reserve due to the major infrastructure expansion necessary to use them. The areas in a dotted outline on the Land Use Map include over 605 acres of such land. The County should encourage merging and consolidation of those lots both to promote open space character of the hillsides and to create viable buildable lots. After removing those unsuitable lots, the Plan promotes a population for this area of 2,528 persons. Areas noted as "Use Constrained Suburban Reserve" would promote an additional 490 persons. This community is expected to grow towards the northwest along Highway 20. It is desirable that Nice retain its resort character and be easily recognized as a separate and distinct community from Upper Lake and Lucerne. New development proposals must be coordinated with the Nice Mutual Water Company's storage capacity.

Class I-IV soils have only been marginally intruded upon in the southwest area of this community for both Industrial and Suburban Reserve densities, south of the Nice-Lucerne Cutoff.

Unincorporated Clear Lake Area. Since the incorporated City of Clearlake will be major population center, with an 18,417 population projected for the year 2000, the land use plan promotes 1150 acres of Suburban Reserve adjacent to the city limits. These reserve areas promote a population of 576 persons. The intent of this designation was to discourage intensive development until the city is capable of providing services. As with all reserve lands, increased development should be phased according to criteria outlined in the Implementation Chapter. Additional reserve areas are located to the north and west of the city, including Sulphur Bank Point.

Lower Lake Area. This community is located at the junction of two major highways, 53 and 29. The Land Use Map promotes a population of 2550 persons. Slightly over 700 acres are designated for Suburban Reserve.

Class I-IV soils were not compromised by residential densities unless existing lot sizes were less than 10 acres. The only exception to the previous statement is the Anderson Marsh area which has over 100 acres designated for Suburban and Reserve development. (Approximately 60 acres are within sewer improvement district.) This property has special characteristics including cultural and biotic resources which need special study. The Plan has policy which requires a "Planned Development" review for all but a single family residence. Policies found under Resource Conservation, in the Resource Management and Conservation Plan, were designated for this and other environmentally sensitive properties, including all the lake islands. (Garner Island, Rattlesnake Island, etc.)

Lucerne Area. As with the community of Nice, the hillside areas surrounding Lucerne have been extensively subdivided into small lots which remain undeveloped. There are approximately 1,044 acres shown on the Land Use Map that have been subdivided into small lots. These properties should be consolidated. The projected population, based on land use policies, would be 2,931 persons. The conversion of non-restricted Suburban Reserve areas would promote 227 additional persons. Other areas which are classified as Constrained-Suburban Reserve (approximately 1,000 acres), are considered unusable due to their existing sizes and characteristics. South and east of this community two areas known as Kono Tayee and Paradise Valley exist. Areas which have been subdivided into 3 acre or less lots are designated Suburban both because of existing development, and approvals and sewer service agreements. The area north of Highway 20 in Paradise Valley encompasses approximately 100 acres of Class I-IV soils. This area was designated Reserve Land due to adjacent development approvals and availability of sewer service. This property should be developed through the "Planned Development" process. Adjacent hillside areas are retained in a Rural Lands category due to excessive slopes.

Clearlake Oaks Area. This community is primarily a resort community which frequently experiences congestion problems due to State Highway 20 bisecting the community. Growth projections on the Land Use Map for this community are 2,731 persons. Conversion of Suburban Reserve lands should not take place without meeting the criteria outlined in the Implementation Chapter. This Suburban Reserve area, when converted, would promote 697 additional persons. Developments east and west along Highway 20 should be carefully considered to reduce the number of new access points along the highway. As with Upper Lake, it is recommended that a frontage road to the east along Highway 20 be considered, in order to promote safer traffic flows. Approximately 90 acres of Class I-IV soils have been designated Suburban Reserve due to lot area character and close proximity to sewer and other public services. Adjacent areas to the east and south are designated Rural Residential, with approximately 300 acres considered prime soils. The majority of these areas have existing acreages which are not viable economic units for exclusive agricultural operations.

Cobb/Loch Lomond Mountain Area. This area is comprised of scattered resort developments. Existing development and land divisions are characterized by very small water systems and septic tanks. Over 880 acres are noted in clusters for Suburban Reserve development. Many of these areas are not expected to convert to smaller residential lots due to a need for community sewer or group packaged sewer systems. Future developments

in this area should be encouraged to cluster to reduce road access points and fire hazards, and improve water and sewer service. The Land Capacity/Capability Implementation Policy is especially suited to these areas. Growth pressures in this area will be primarily from expanded geothermal development. The two main transportation corridors of Bottlerock Road and Highway 175 are experiencing heavy geothermal-related truck traffic. Special effort should be made to constrain new access points to these roadways and request that both the state and geothermal companies provide truck deflectors (turnouts). Resorts are encouraged in this area, including the upper Bottlerock Road area, in order to take advantage of the reservoir of hot water available under the subsurface. Small area community plans are appropriate for the small resort-related communities. Population/development proposals within Suburban Reserve area is for 443 people. The low population buildout does not reflect dwelling unit densities. These resort and suburban areas are located in an area of extensive non-resident summer homes which, as mentioned in Table IV-7 footnotes, are not population generators. Prime agricultural soils do exist in the Cobb Valley but extensive subdividing has occurred, significantly compromising the potential of full time agricultural activity.

Guenoc Ranch Area. This area includes over 20,000 acres under one company's ownership which is promoting viticulture and a 50,000 sq. ft. winery. Over 1,100 acres in small clusters have been promoted for Suburban Reserve development on the Land Use Map. This area should be developed under the Planned Development (PD) concept when reviewing residential development proposals. If the area converts to a Suburban designation through the PD process, development population may approach 3,000 persons. Without the conversion, the population would not be likely to exceed 566. This area also includes over 2500 acres in the Rural Residential designation which is primarily located in rolling foothills. Less than 250 acres of Class I-IV soils have been designated for Residential designations.

Kelseyville Area. Surrounded to the west, north and south by prime agricultural lands, this community provides services to the Big Valley farming community. Development is encouraged to the east towards the foothills, consistent with Plan policies that would preserve Class I-IV soils. The Plan would promote a population of 2,700 without converting Reserve Lands. Over 3,400 acres in this Big Valley study area are within the Rural Residential designation. Areas designated are either just above the valley floor or within area clusters having lot sizes that are already 5 acres or less. Few areas of prime agricultural soils have been designated for residential uses. Their locations are the clusters previously mentioned and an approximate 100 acre area adjacent to Bottlerock Road.

Middletown Area. Middletown is geographically isolated from other communities, and its location is at one of the primary transportation intersections in the County. The Land Use Map shows the core of this community as Urban surrounded by a ring of Suburban, which is in turn surrounded by a ring of Suburban Reserve. The designated land area would promote a population of 1,808 persons; 2,773 persons with the conversion of Suburban Reserve designations. Approximately 400 acres of Class I-IV soils east and west of Middletown, along Highway 29, are designated for Rural Residential in order to reflect established parcel sizes (generally less than 20 acres).

Buckingham/Soda Bay/Rivieras Area. This area is characterized by pockets of development scattered along 9 to 10 miles of shoreline. The Land Use Map designates 5,900 acres of Suburban development. Additionally, 640 acres of Suburban Reserve has been designated in the Soda Bay Road area. Approximately 40 acres of Class I-IV soils, at the intersection of Highway 29 and Soda Bay Road, were designated Rural Residential.

Conclusion

The previously mentioned communities represent the major residential development areas proposed in Lake County. Special mention was made of Class I-IV soils in order to identify areas which may experience transition in use. When considering the conversion of these areas, care should be taken to prevent the premature use of these prime soil areas. Please see the Implementation Chapter for more specific timing policy for General Plan map.

NOTE: Changes from Preliminary Draft Plan Land Use Map. The consultant's draft originally proposed extensive areas in the Urban designation (9000 acres). The consultant's urban designations were determined by the Commission to be out of character with Lake County's growth, whereby those areas were reduced to less than 1600 acres which include Commercial, Industrial and Residential uses. Preliminary proposals for Suburban development were shifted due both to Urban converted area and existing land divisions not originally considered by the Preliminary Draft. Changes were also made due to natural service constraints for existing development and to give special attention to the mountain areas by adding a new designation of "Suburban Reserve." Table IV-7's footnotes note both constrained and unconstrained Reserve Lands. Constrained lands are not expected to convert due to physical and major service constraints. The Rural Residential designation was adjusted from the preliminary plan by increasing the acreage minimums from 1 acre to 5 acres, with a 10 acre average. This designation is intended to serve as a buffer between Intensive Agriculture and other areas. Some of the areas so designated are intended to reduce the pressure for the valley agricultural lands by promoting 5 acre plus parcels in the adjacent foothills. Additionally, the present Land Use Map is the result of the Draft General Plan's initial environmental review, and the County's use of updated Soil and Conservation Survey Studies (December, 1980) for the Big Valley, Scotts Valley and Middle Creek areas. This was to better determine Class I-IV soils for an updated land suitability analysis. Additional evaluation of slope was undertaken at a 1 x 2000 ft. scale to better determine the boundaries for various land use designations versus the consultant's 1 x 6000 ft. scale.

Land Use Implementation

Absorption Capacity and Holding Capacity

Figure IV-1 illustrates projected trends in the County's population growth. The projections extend toward an estimated population of up to 84,327 which represents the absorption capacity provided by the Land Use Map and policies. However, this absorption capacity does not represent a full build out population but an adjusted one. Occupied build out would include such Lake County realities as demonstrated in the 1980 Census as 28% of the housing stock being vacation homes for non-county residents and up to a 33% long-term land vacancy rate (due to resort/retirement), along with other factors such as housing need and extensively subdivided areas which are unusable or undevelopable.

For the purposes of using population figures in this plan and designated densities on the Land Use Map, absorption capacity is the potential total population that would result from past growth trends exhibited on the Land Use Map, after considering second home development vacancy rates, and areas needed for streets, commercial development, public services, etc. In reality, without using an adjusted absorption capacity rate, the maximum build out population on the Land Use Map would be an unrealistic figure since most existing development will not be removed and replaced at maximum potential, and necessary services may not be available to support maximum density. The primary value of these estimates is found in their use as indicators of the long-term effects of land use policies on the area's economy, especially in terms of the plan providing opportunities for new development. Table IV-7 notes the estimated absorption capacity for residential "designations" in individual study and community areas.

A measure of population limits which is more useful than Absorption Capacity in evaluating land use decisions and their short-term economic effects, is the population "Holding Capacity" of the County. This represents the maximum population which can be accommodated, not only due to potential policy constraints in the plan, but also by the resources available for supporting the population. From a Countywide perspective, the Holding Capacity is most directly related to how much water will be available. After preparation of a Master Water Plan study, Land Capacity/Capability Ordinance(s) and subsequent capacity studies (which are beyond information found in the technical appendices), special attention can be given to individual communities' service needs and limitations, whereby the County can adopt holding capacity policies.

- * See the Implementation section of the Resource Management and Conservation Plan for related discussion of physical constraints and land suitability which was also used in determining appropriate Land Use designations. Also refer to the EIR for discussion of individual communities.

TRANSPORTATION

The development of a transportation system and all its components must be integrally related to the development of the land use pattern. The designation of lands for intensive uses must be accompanied by an adequately sized road system in order to allow safe and efficient access and circulation. At the same time, the rising costs of fuel and hence our rising cost of travel suggest a transportation system that must seriously include modes of travel other than automobiles and that must examine ways of reducing travel distances. Development patterns that promote opportunities to bicycle or walk to school, work, or play areas become solutions to transportation issues. In short, transportation planning must proceed in concert with land use planning.

Streets and Highways

The State Highway System and the County road system comprise virtually all of the road network in the County (see Figure IV-9). The former carries most of the through traffic and much of the long distance travel in the County. Tourist travel greatly increases the use of these roads during the summer months. In particular, Highways 20 and 29 experience greater traffic volumes as they provide the primary access from Sacramento and the San Francisco Bay Area. Portions of these highways near the County line, are now at capacity or are expected to be at capacity within the next five years. Other segments along the south side of Clear Lake, around Lower Lake, have experienced increases in traffic as a direct result of the residential growth in that portion of the County. Figure IV-10 indicates when the California Department of Transportation (Caltrans) expects various segments of the State Highway System to reach capacity. The estimates are based on comparisons of projected traffic volumes with the road capacity. The assessment is a general one, and it can be expected that portions within the identified road segments will reach or exceed the desired service capacity at a time different than indicated on the figure.

Local access and travel within the region are provided by the County road system. This system accounts for most of the road mileage in the County, representing roughly 80 percent of the total (excluding roads that are designed solely to meet specific agency needs). The approximately 800 miles of County roads have been classified into three types, according to their function: major collector, minor collector, and local road.

- Major collectors provide travel within the County to communities not directly served by the State Highway System. Examples of such roads include: Seigler Canyon Road, Old State Highway, Lakeshore Drive, Sulphur Bank Drive, Olympic Drive, Soda Bay Road, Nice-Lucerne Cutoff, Scotts Valley Road, Bottle Rock Road, Butts Canyon Road, and Burns Valley Road. These roads account for about 15 percent of the County road system.
- Minor collectors collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road. Examples of this type of road include: Elk Mountain Road, Hoberg Drive, Main

Street, Gaddy Lane, Sulphur Creek Road, Red Hills Road, Socrates Mine Road, and Highland Spring Road. This type of road accounts for less than 10 percent of the County road system.

- Local roads primarily provide access to adjacent land uses and travel service over relatively short distances.

Other roads are maintained by state and federal agencies. The U.S. Forest Service, for example, maintains about 400 miles of road open for public use at least part of the year in Lake County. These roads are important to the recreational use of the National Forest.

Transit

Transit operations in the County are typically provided by social service agencies as a service to their clients. However, there is still a sizeable population that is "transit dependent" and in need of better service. These individuals are without automobiles or are unable to drive, and must rely on others to take them on essential shopping, business or medical-related trips. An inventory of the County's potential transit dependent population (for 1979) includes:

- low income persons (below the poverty level) who are under 60 years old and therefore ineligible for senior transportation services.
- senior citizens over 60 years old, of which there are nearly 12,000.
- 5,387 students, many of whom must rely on their parents to transport them to the school bus stop and to social and recreational activities.
- persons with physical or mental disabilities such as the 960 blind, 1,160 with orthopedic disability, 60 with epilepsy, 610 with mental illness or retardation, and 400 with hearing disease.

Monies from the State Transportation Development Act are being used to finance the transit programs in the County. Aimed at providing services primarily to senior citizens, North Coast Opportunities Inc. operates a shuttle bus in Lakeport and Clearlake, and both North Coast Opportunities and Progressive Seniors of Kelseyville operate volunteer driving programs. The Lakeport area will receive a dial-a-ride service sponsored by Lake County Transit during 1981-82 fiscal year. The system, which functions like a taxi service except a fixed fee is charged and multiple riders are carried, is the second transit program for the general public. The dial-a-ride service is a step towards satisfying the County's unmet transit needs which were established in the Lake County Transit Study prepared for the Lake County/City Area Planning Council by Caltrans.

Air Transportation

The County has three public and four private airports listed with the Federal Aviation Administration. Recreational flying is the primary activity conducted on these fields. The two largest airports are County-



Figure IV-9 Transportation Systems
LAKE COUNTY, CALIFORNIA

This map shows generalized data. 0 10,000 20,000 feet Sedway/Cooke



**Figure IV-10 Estimated Period
When Traffic Volume Exceeds
Desired Level of Service**

LAKE COUNTY, CALIFORNIA

This map shows generalized data

0 10,000 20,000 feet

Sedway/Cooke



operated. Lampson is situated south of Lakeport in Big Valley and Pierce is located in the City of Clearlake. The short runways and limited storage and material-handling capability effectively restrict the size and type of planes that can safely use the facilities. The County Master Plan for the airports examined various alternatives for improving the facilities. The recommended program proposes to expand existing airport operations and suggests measures for mitigating noise impacts on surrounding land uses.

Nonmotorized Travel

Nonmotorized travel includes bicycling, walking, and horseback riding. Traditional transportation planning treated these modes of travel as purely recreational activities. However, the increasing cost of energy has made nonmotorized travel a viable alternative to the automobile in many places. Lake County is fortunate in that most of its communities are small and nonmotorized travel can easily be encouraged. A bicycle plan for the County was approved by the Board of Supervisors in 1980. It proposes an integrated system linking the communities around Clear Lake, as well as routes within the communities.

Pipelines and Transmission Lines

While pipelines and transmission lines are often necessary companions of the high quality of life, their planning and design can detract from that quality of life. Pipelines and transmission lines have a significant effect on the pattern of land uses and the distribution of growth. Typical facilities include public and private sanitary sewerage, water, natural gas, electricity, telephone, storm sewerage networks. While the provision of these facilities does not cause growth to occur, it certainly facilitates growth. Consequently, the extension of these facilities into prime agricultural lands or environmentally sensitive areas can encourage development in areas inappropriate for intensive use. The direct result is the loss of a valuable, productive resource with little hope of ever being able to rehabilitate or restore it. Similarly, the geothermal development now occurring in the southwestern portion will require transmission corridors for steam transmission pipelines and electrical lines which must be maintained and will traverse larger, undeveloped scenic areas. In the interest of protecting the natural environment and assuring that plans for the provision of water, sewerage, and power reinforce the County's land use decisions, the County must inform public and private utilities of its desires.

Navigable Waterways, Harbors and Terminals

Sailing, fishing, and boating are common in the County's many lakes. However, local waterways are generally only used for recreational purposes rather than extensive residential or industrial traffic. Boating safety is enforced by the County Sheriff's Department. Development within and along the lakeshore is regulated by a variety of agencies including the Army Corps of Engineers, California Department of Fish and Game, County Planning Department and Lakebed Management Division. County waterways are essentially land-locked as local bodies of water do not connect with coastal or other adjoining navigable waterways.

Objectives and Policies

The County's Regional Transportation Agency, the Lake County/City Area Planning Council, is responsible for preparation and implementation of the County Regional Transportation Plan. The 1980 update of the plan provides a policy framework and detailed program for transportation development in the County. The objectives and policies presented below acknowledge the planning effort in formulating the Regional Transportation Plan and reaffirm its policy direction. (Circulation plan is shown on Figure IV-11.)

The following policy areas are discussed:

1. Roads
2. Circulation and Land Use Planning
3. Road Design Considerations
4. Transit
5. Air Transportation
6. Nonmotorized Transportation
7. Pipelines and Transmission Lines

1. To insure that safe and adequate levels of service are maintained on County and State roads.

- 1.1 The County should design its road network, as shown in the Figure IV-11, to accommodate the projected growth in traffic volume resulting from residential development, commercial and tourism expansion, and geothermal activity.

The following classifications should be used to describe the road system.

<u>Classification</u>	<u>Function</u>
State Highway	through County long distance
Major Collector	intraregional travel service
Minor Collector	collect traffic from local roads
Local Road	access to adjacent land uses

- 1.2 Roads should be improved and constructed to the design standards recommended by the County Department of Public Works, as shown in Table IV-9.

- 1.3 The County should continue to upgrade the road system to reduce traffic accidents, improve circulation, and maintain its physical condition, in conformance with the priorities and recommendations established in the Regional Transportation Plan. These include:

- Actively support the development of a 4-lane expressway around the south side of Clear Lake (Route 53 and 29).
- Support continued efforts to develop plans for improvements to Route 53 and attendant service roads between Lower Lake and Highway 20.



Figure IV-11 Circulation Plan
LAKE COUNTY, CALIFORNIA

This map shows generalized data. 0 10,000 20,000 feet Sedway/Cooke ↑

TABLE IV-9

LAKE COUNTY ROAD STANDARDS

	Major Collector		Minor Collector		Local	
	Urban/Suburban	Rural	Urban/Suburban	Rural	Urban/Suburban	Rural
Design speed	25 mph	50 mph	25 mph	40 mph	25 mph	30 mph
Surface type ¹	Medium	High	Low	Medium	Low	Low
Number of Lanes	2-4	2-4	2	2	2	2
Lane width	12'	12'	11'	11'	11'	11'
Right-of-way width	60' (min.)	60' (min)	50'	60'	50'	50'
Maximum grade ²	10%	8%	10%	12%	10%	15%
Safe loading	H-20 - S-16	H-20	H-20 - S-16	H-20	H-20 - S-16	H-20

¹High - Bituminous concrete, sheet asphalt or rock asphalt.

Medium- Mixed bituminous with one inch or more compacted surface course and combined thickness of surface and base, 7 inches or more.

Low - Mixed bituminous with one inch compacted surface course, but with combined thickness of surface and base less than 7 inches, or bituminous surface-treated earth, gravel or stone road with surface course less than one inch.

²In mountainous terrain, the maximum grade permitted may be increased accompanied by appropriate reductions in design speed required, roadway width, and surface type (for collector roads).

- Continue systematic improvements to remaining County-maintained portions of Soda Bay Road for ultimate inclusion in the State Highway System.
2. **To ensure that the road system is appropriate and supportive of an orderly pattern of land uses.**
 - 2.1 Through-traffic should be avoided in residential areas.
 - 2.2 Minor collectors should be used to provide access to higher density residential areas, local commercial facilities, neighborhood parks and schools.
 - 2.3 Major collectors should be appropriate locations for major neighborhood retail and service facilities, community centers, major recreational facilities, employment centers, and other intensive land uses.
 - 2.4 Parking lanes outside of communities should be permitted for emergency parking only.
 - 2.5 New road alignments that divide agricultural lands into undesirable and inefficient units should be avoided.
 - 2.6 The County should encourage coordination between local general plans of incorporated cities, the Lake County Regional Transportation Plan, and the road improvement programs that each implementing agency undertakes.
 - 2.7 The County should cooperate with the Lake County/City Area planning Council in evaluating the impact of geothermal energy development on highways and local roads in the County.
 3. **To insure that the design of roads conserves material, construction labor, construction equipment, and environmental values.**
 - 3.1 Roads that traverse natural or man-made drainageways should be designed to minimize backwater effects, scour, and erosion.
 - 3.2 The pavement design standards should be appropriate for the vehicles, traffic volume, and conditions relating to subgrade soil, surface drainage, and climate existing at the pavement's location.
 - 3.3 Roads should be designed to the minimum allowable widths, consistent with safety and traffic characteristics, in order to minimize initial and subsequent maintenance costs.
 - 3.4 Roads should be planned and designed to minimize disruption of the soils, natural land contour, vegetative cover, and wildlife habitat.

4. **To support the development of a public transportation system in order to provide an alternative to the private automobile and to meet the needs of those that are "transit dependent."**
 - 4.1 The County should support the continuation and coordination of transportation programs, provided by social service agencies, particularly those serving elderly and handicapped.
 - 4.2 The County should cooperate with the Lake County/City Area Planning Council or any other agency in studying transit needs and developing an implementation program for public transportation services in Lake County.
 - 4.3 The County should support the list of priorities for development of transit services outlined in the Regional Transportation Plan. Efforts should be directed first towards:
 - encouraging new and improving existing transportation services for the elderly and disabled;
 - serving the high density areas of Lakeport and Clearlake;
 - providing intercommunity services around Clear Lake; and
 - supporting efforts to expand intercity transit carriers, particularly to Ukiah and the Central Valley.
 - 4.4 The County should promote a land use pattern within concentrated urban areas which can be efficiently served by public transit.
 - 4.5 Potential destinations of transit systems, including employment centers, schools, personal services, administrative and professional offices, and social/recreational centers, should be clustered within a convenient walking distance of one another.
5. **To provide safe general aviation facilities for Lake County, including ability to handle small air carrier operations.**
 - 5.1 The County should actively encourage establishment of scheduled air carrier services to Lake County.
 - 5.2 The County should continue the current policy of improving and modernizing County air transportation activities and services.
 - 5.3 The County should commit to implementing the appropriate and approved recommendations from the Airport Master Plan including new sites.
 - 5.4 The Airport Master Plan should offer recommendations and policies for adjacent land uses including accessory heavy commercial/industrial activities consistent with policy I.10 of the Land Use policy section.

- 5.5 Lake County shall designate those areas identified as clear zones in the Airport Master Plan with an overlay zone restricting height and density or occupancy loads of uses within that area.
6. **To encourage the use of nonmotorized transportation where it is safe and financially feasible.**
- 6.1 Where feasible, the County should consider incorporating facilities for nonmotorized users when upgrading County roads and facilities. Improvements for adopted bike routes should be particularly emphasized.
- 6.2 The County should encourage local government agencies and businesses to consider, where feasible, the inclusion of nonmotorized access and the provision of safe bicycle parking facilities at office buildings, schools, shopping centers, and parks.
- 6.3 Where feasible, the County should establish hiking and equestrian trails.
- 6.4 Design standards for the development, maintenance and improvement of bicycle routes should follow the standards adopted by Caltrans and as required by Section 2375 and 2376 of the Streets and Highway Code.
- 6.5 Pedestrian and bicycle travel routes should be selected to have a minimum grade (elevation) change along their lengths.
- 6.6 Potential conflicts between nonmotorized and vehicular travel should be minimized. With respect to bicycle safety, greater emphasis should be placed on bicyclist education programs.
7. **To insure that the location, distribution, and size of transmission lines and pipelines are consistent with the land use development pattern and are sited to reduce environmental impacts.**
- 7.1 Service providers of water, sewage treatment, and power should coordinate their programs with the County's proposed development patterns, so that they may provide these services more efficiently.
- 7.2 Extension of services, such as sewer, water, power lines, and roads should avoid traversing agricultural lands. Where such extensions must cross agricultural lands, they should be located in the public right-of-way or along lot lines whenever possible. If appropriate, these service lines must be consistent with the development intensity reflected on the Land Use Plan.
- 7.3 The siting of transmission lines should avoid interfering with scenic views to the greatest extent possible, taking into account the design and size of the transmission towers, the nature of the landscape, and the placement of the transmission towers in the landscape.

TABLE IV-10

TRANSPORTATION IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
<u>Transportation IV-24</u>			
1.1, 1.2, 1.3, 3.1., 5.2, 5.3, 5.4, 7.1	Public Works Dept., Planning Commission, Planning Dept., Board of Supervisors, various public and private service providers.	Self explanatory.	Immediately.
2.1, 2.2, 2.3, 4.4, 4.5	Public Works Dept., Planning Commission, Planning Dept., Board of Supervisors.	Review of development projects to insure proper location and circulation patterns.	Immediately and every 2 years in conjunction with Regional Trans- portation Plan.
2.4, 2.5	Public Works Dept.	Incorporate this policy into the master trans- portation system.	
2.6, 2.7, 4.2	City of Lakeport & Clearlake, County of Lake - Public Works Dept.	Maintain working relationship with various agencies to insure coordination of road improvements, exchange data on projected traffic impacts, and participate in master circulation coordination.	Immediately and every 2 years in conjunction with Regional Trans- portation Plan.
3.1, 3.2, 3.3, 3.4	Public Works Dept.	Enforce, maintain and modify as necessary the standards for road development and improve- ments.	Immediately and every 2 years in conjunction with Regional Trans- portation Plan.
4.1, 4.3	Board of Supervisors, Planning Commission, Public Works Dept.	Provide data to agencies that are developing transportation program.	Immediately upon adoption of Airport Master Plan.

TABLE IV-10

TRANSPORTATION IMPLEMENTATION

<u>POLICY</u>	<u>IMPLEMENTOR/ ACTIVATOR</u>	<u>ACTION</u>	<u>PHASING/TIMING</u>
<u>Transportation (Cont.)</u>			
5.1, 5.5	Public Works Dept. Planning Commission, Board of Supervisors, Planning Dept.	Provide proper zoning in areas which would be suitable for air carrier services.	
6.1, 6.2, 6.3, 6.4, 6.5, 6.6	Public Works Dept., Planning Commission, Board of Supervisors, Planning Dept.	Incorporate facilities for nonmotorized users into overall circulation plan and new development projects. Enforce existing standards for the development of nonmotorized facilities. Also provide information to the public on location and use of nonmotorized facilities to better coordinate its relationship with this. The Areawide Regional Transportation Plan should be reevaluated within two years.	
7.2, 7.3, 7.4, 7.5	Public Works Dept., Planning Dept., Planning Commission, Board of Supervisors, Service Providers.	Continue to work with public utility companies in the review of new developments. Conduct a transmission corridor study to determine overall plan for location of transmission lines.	Immediately. Transmission study upon completion by California Energy Commission, PG&E, etc.

- 7.4 Power transmission lines should be located to minimize interference with valuable vegetation and wildlife habitats. Special attention should be paid to the location of flyways, and nesting and feeding sites of waterfowl, eagles, hawks, and other birds in order to reduce the possibility of collision or electrocution.
- 7.5 Maximum use of existing right-of-way corridors should be encouraged, especially for export lines from the generating plants in the Geysers-Calistoga Known Geothermal Resource Area.

HOUSING

Housing Background

The total number of persons living in Lake County was increased from 19,548 in 1970 to 36,366 in 1980, a change of 86 percent. Table IV-11 estimates the current age characteristics based on 1970 relationship.

TABLE IV-11
LAKE COUNTY AGE DISTRIBUTION, 1980

<u>Age</u>	<u>Total Population</u>	<u>Percent</u>
0-19	8,946	24.6
20-24	1,855	5.1
25-34	4,000	11.0
35-49	5,382	14.8
50-59	4,692	12.9
60 +	11,491	31.6
TOTAL	36,366	100

Source: Lake County Planning Department
1980 Census

This age distribution is typical of many rural areas where an "hour-glass" effect occurs, that is, a large portion of the population is within two extreme age groups: under 19 and 60-and-over, with a small percentage in the middle. The housing needs of the elderly population warrants special attention. Between the years 1976 and 1980, the County experienced an annual employment growth rate of 5 percent, with an average of 400 new jobs created each year. The labor participation rate (that proportion of the County's population that is actively employed) in 1980 was 37 percent.

Household Characteristics

Of the County's estimated 17,200 households, over three-quarters occupy their own unit. The rest occupy rental units or reside in group quarters.

The average number of persons per household has dropped steadily. While socio-economic changes such as individuals marrying later, couples having fewer children, and children leaving home earlier have provided the impetus for smaller household sizes, in Lake County the low average household size is more the result of a large in-migration of elderly couples. In 1970, the average household size was 2.5 persons; in 1980, it was 2.36 persons.

The median income in the County of \$12,900 is far below the State median of \$20,653 (in 1980). This low level is largely attributed to the sizeable retirement population living on fixed incomes, as well as the seasonal employment base.

The State defines "very-low" income households as those earning less than 50 percent of the County median. Thus, households earning less than \$6,450 would be considered very low income (see Table IV-12). It is estimated that 40 percent of the County's households fall in this category. "Other lower" income is defined by the State to include those households earning above \$6,450 but not more than the median family income of \$12,900. It is estimated that 31 percent of the County's households fall into this category. These households, most particularly, will feel the spiraling costs of housing. State housing law requires that special efforts be made to insure that these income groups have the opportunity to secure decent housing in a healthy and satisfying environment.

TABLE IV-12
HOUSEHOLD INCOME GROUPS

	<u>Total Households</u>	<u>Percent</u>	<u>\$ Amount</u>
1. Very Low	3,646	24	\$ 6,450
2. Other Lower	4,710	31	12,900
3. Moderate	2,886	19	15,480
4. Above Moderate	<u>3,950</u>	<u>26</u>	above \$15,480
TOTAL	15,192	100	

Source: Lake County Planning Department and
Department of Housing and Community Development

Housing Characteristics

Over the last ten years the number of dwelling units, according to the 1980 Census, grew from 12,161 to 23,008, an 89 percent increase. Because of their affordability, mobile homes constitute a significant component of the County's housing stock. This is borne out in Table IV-13 which shows the composition of the housing stock by housing type.

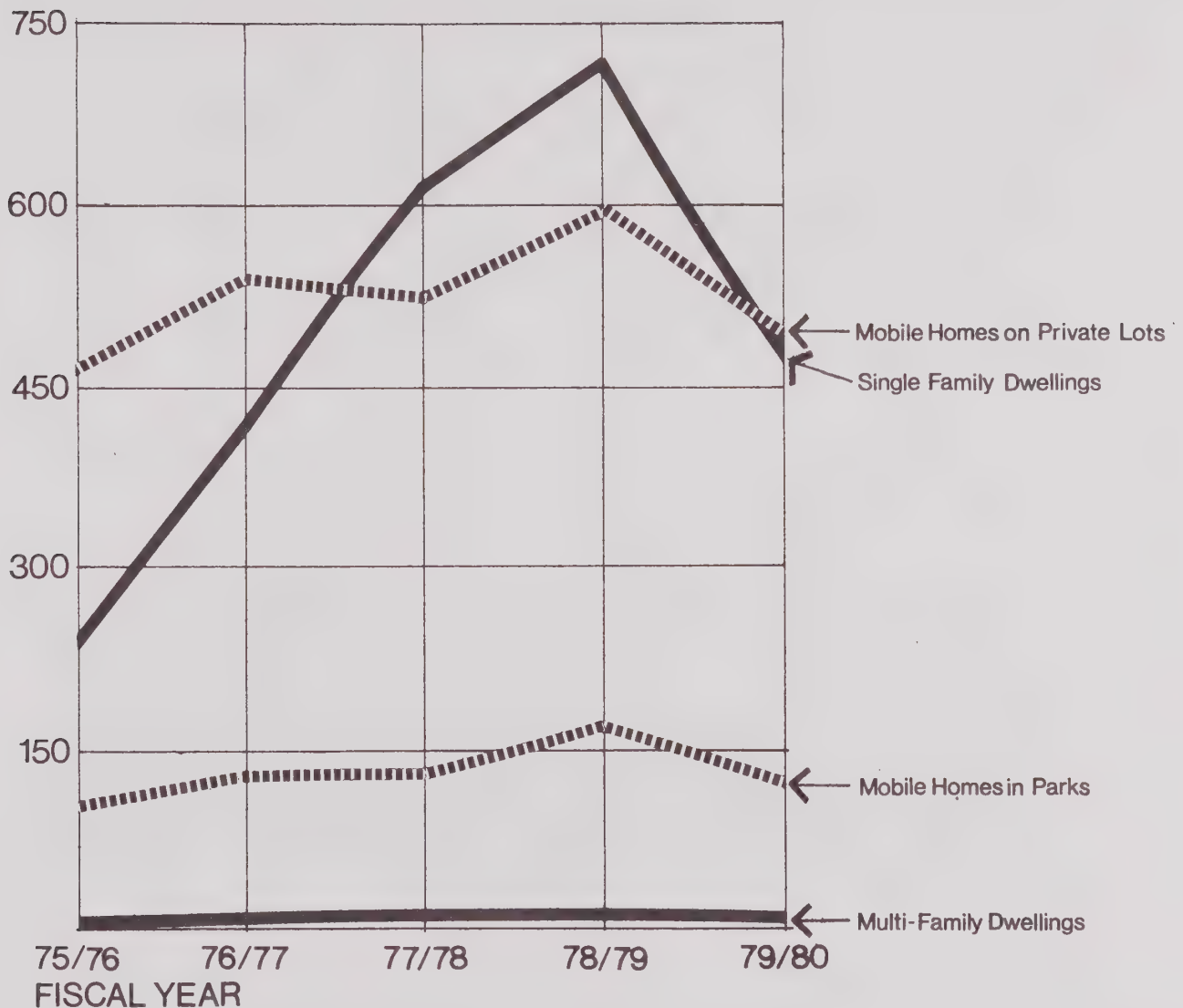
TABLE IV-13
HOUSING TYPE - 1979

	<u>Housing Units</u>	<u>Percent of Total</u>
Single-Family	12,556	67.1
Multiple (2-4)	780	4.2
Multiple (5)	479	2.6
Mobile Home	<u>4,886</u>	<u>26.1</u>
TOTAL	18,110	100

Source: Housing Units by Type for California Cities and Counties 1970 and 1975 Through 1979 (Dept. of Finance Report 79-E-3a 1979)

Lake County's zoning ordinance provides an "MH" overlay, which allows for the placement of mobilehomes on many residential zoned lots throughout the County. As illustrated in Figure IV-12, approximately 45 percent of the residential building permits issued in the last five years have been for the placement of mobilehomes on individual lots. This demonstrates the ready availability of lower priced parcels, appropriately zoned, to accommodate the needs of residents for lower priced housing. Lake County intends to retain the "MH" overlay as a chief solution to the provision of necessary low and moderate income housing units.

**Figure IV-12 RESIDENTIAL BUILDING PERMIT ACTIVITY COMPARISON,
1975-1980 (Permits issued)**



The distribution of these units throughout the County is dispersed in small clusters of development. The only major concentrations appear in the incorporated cities of Lakeport and Clearlake. Figure IV-13 shows the County divided into seven areas (comprised by aggregating U.S. Census enumeration districts) and for each area, relevant statistics on population and housing.

Of the total number of vacant units in 1970: 5 percent were for rent, 4.3 percent were for sale, 78.3 percent were for "other" vacant, and 12.4 percent were for seasonal and migratory units. Assuming that the same ratios apply today, Table IV-14 contains an estimate of the number of vacant housing units for sale, rent and "other" for 1980.

TABLE IV-14
VACANCY DATA 1980

	<u>Housing Units</u>	<u>Percent</u>
Vacant for Sale	365	4.3
Vacant for Rent	425	5.0
Other Vacant	6,648	78.3
Vacant Seasonal and Migratory Units	<u>1,052</u>	<u>12.4</u>
TOTAL	8,490	100

Source: Lake County Planning Dept., 1970 & 1980 Census.

Although it is apparent that the County has an unusually high vacancy rate, nearly 37 percent, it is well known that the vacancy rate reflects the portion of the housing market that is second-home and recreational. If you discount the "other" vacant and seasonal vacant the vacancy ratio is about 3.4 percent. Whatever the "true" rate, many individuals seeking home ownership or rentals have experienced a relatively "tight market" with most vacancies not available due to out of County and state ownership. During the housing condition survey, described below, five unincorporated communities were surveyed and only one had an observed vacancy rate above 3 percent. The two incorporated communities in Lake County were not surveyed (Lakeport and City of Clearlake).

Housing Conditions

Many of Lake County's housing units were built in the mid-to-late 1960's during the boom of recreational development in the State. A record of subdivision activity shows in 1968-69 alone, nearly 8,000 lots were created, or roughly a quarter of the existing lots of record in the County. As in other resort communities, many recreational homes are being converted to year-round residences and many of the units are less than adequate.

A selective sampling of housing conditions in the more populated areas of the County was conducted in 1981 by the Planning Department to evaluate present housing conditions. The survey, which was designed to follow State Housing and Community Development guidelines, covered 2,286 dwelling units or about 10 percent of the total housing stock. Community areas covered during the survey were Upper Lake, Nice, Kelseyville, Lower Lake, and Middletown. Each structure survey was rated according to the following point system:

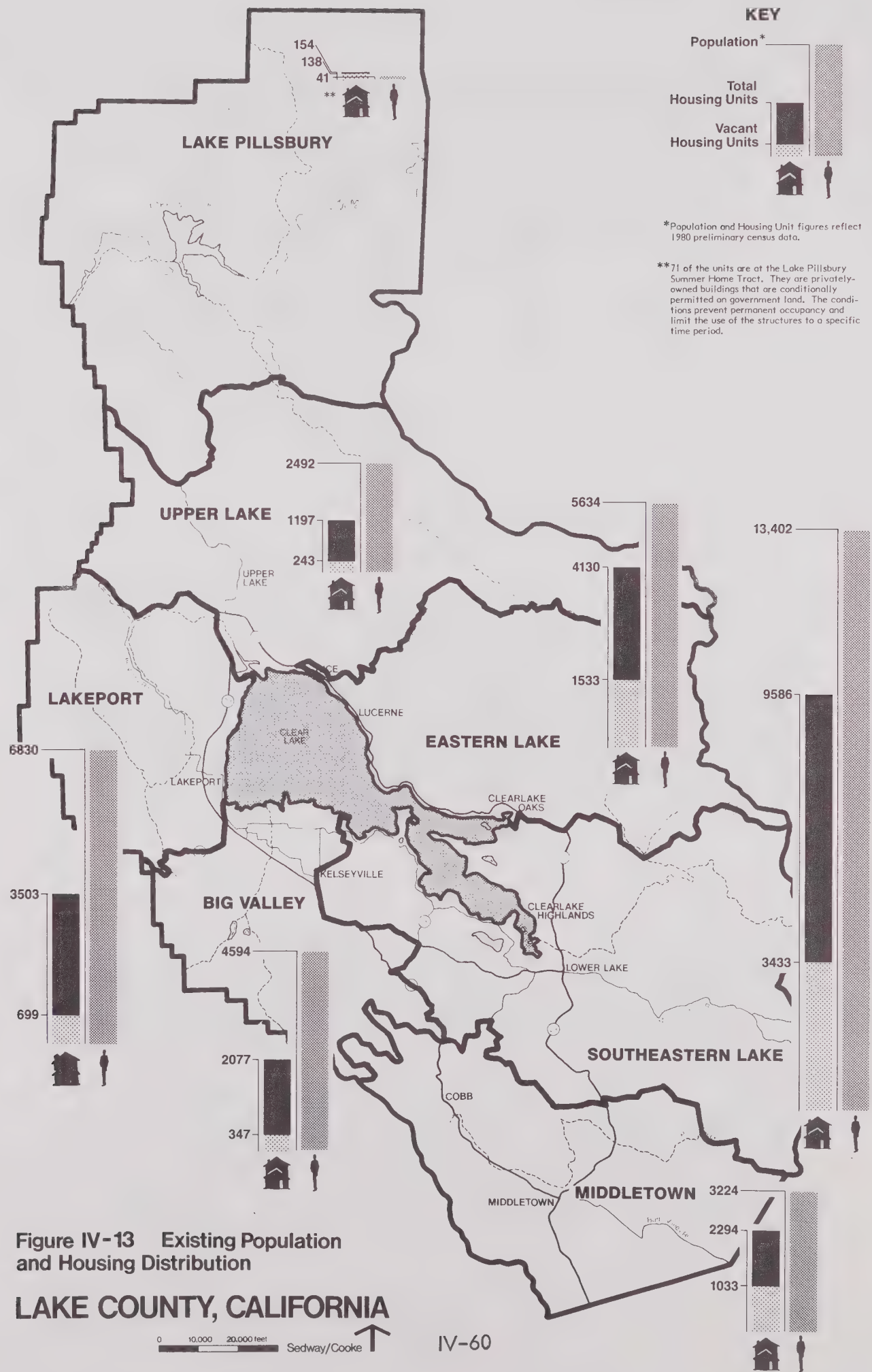
Residential Structure (other than a mobile home)

1 - adequate	No structural and/or electrical service defects, relatively well-maintained.
2 - needs rehabilitation	1 structural defect or 1 electrical defect or 3 or more maintenance problems.
3 - substandard	1 structural or 1 electrical defect and 2 or more maintenance problems.
4 - dilapidated	2 structural and/or electrical defects and 2 or more maintenance problems.

Mobile Home

1 - adequate	Standard size, no major defects.
2 - substandard	Trailer-size, 2 or more physical problems.

Table IV-15 shows the survey results. While 259 units were judged to be in need of minor repairs or rehabilitation, 115 units each were found to have major multiple defects, and 29 units were found to be dilapidated. Assuming that the survey is representative of the entire housing stock, Table IV-16 indicates the condition of the entire housing stock of Lake County.



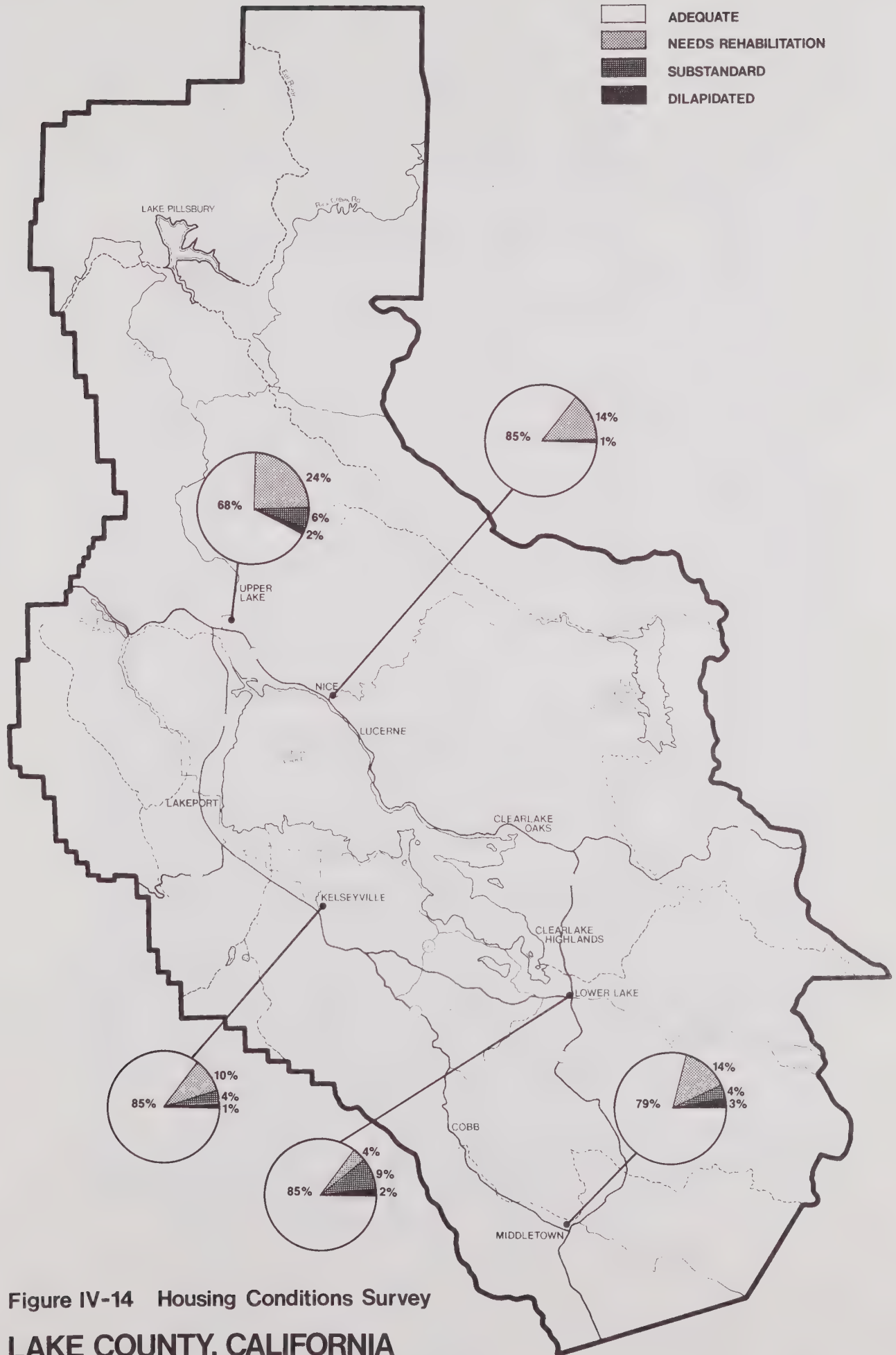


Figure IV-14 Housing Conditions Survey

LAKE COUNTY, CALIFORNIA

TABLE IV-15
LAKE COUNTY HOUSING SURVEY RESULTS
1981

<u>Area</u>	<u>Enumeration District</u>	<u># of Units Surveyed</u>	<u>% of Census Count</u>	<u>Rated Adequate</u>		<u>Needs Rehabilitation</u>		<u>Sub-Standard</u>		<u>Dilapidated</u>	
				<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Upper Lake	61	242	94.16	165	68.19	57	23.55	15	6.20	4	1.65
Nice (Partial)	63 (Partial)	465	N.A.	394	84.73	64	13.76	5	1.08	0	
Kelseyville	74	275	94.18	209	76.00	48	17.45	14	5.09	4	1.45
Kelseyville	75	427	95.10	391	91.57	19	4.45	17	3.98	0	
Lower Lake	100	536	88.01	453	84.51	22	4.10	49	9.14	12	2.2
Middletown	101	341	93.68	268	78.59	49	14.37	15	4.40	9	2.6
Total		2,286		1,880	82.22	259	11.33	115	5.03	29	1.27

(Numbers may not add because of independent rounding.)

Source: Lake County Planning Department, February 1981.

TABLE IV-16

HOUSING STOCK CONDITION

	<u>Housing Unit</u>	<u>Percent of Total</u>
Adequate	18,936	82.3
Substandard	2,623	11.4
Dilapidated	<u>299</u>	<u>1.3</u>
TOTAL	23,008	100%

Source: Lake County Planning Dept., Housing Survey, 1981.

No recent information is available on the extent of overcrowding; however, the 1970 census reports that overcrowded units accounted for 6.5 percent of the housing stock. With the trend for smaller household sizes, a decline in overcrowded housing conditions would be expected. Assuming a slightly lower proportion today, 6 percent would indicate 912 units experienced overcrowded conditions.

Housing Affordability

It has been customary practice in housing analysis to utilize as a rule of thumb a standard that no more than 25 percent of household income should be spent for shelter. In 1979, HCD estimated 2220 households paid more than 25 percent of their income for housing; 1,020 owned their unit and 1,200 were renting their unit. The elderly accounted for 702 of these households with 322 owning and 379 renting.

The experience of recent years has been for households to devote a higher percentage of income for housing. In addition, the Federal Bureau of Labor Statistics (BLS) has estimated that because of such factors as reduced expenses related to not working and lower income taxes resulting from Social Security payments being tax exempt, a retired couple requires only 65-80 percent of preretirement earnings to have the same standard of living. This study implies that for the elderly the 25 percent rent to income ratio could be increased without sacrificing other essential needs. The latest available information from the BLS (1976) indicated that housing for elderly households represented about 35 percent of total income.

Utilizing both the 25 percent and the 35 percent standard, Table IV-17 represents the range of rental rates and sales prices which correlate to the income distribution of Lake County's population.

TABLE IV-17
PRICE RANGE OF AFFORDABLE HOUSING
BY INCOME GROUP
LAKE COUNTY, 1980

<u>Income Group</u>	<u>% of Population</u>	<u>Affordable Rent</u>		<u>Affordable Sale Price</u>
		<u>25%</u>	<u>35%</u>	
Very low - under \$6,450	24	\$134	\$188	\$25,800
Other low - \$12,900	31	\$269	\$376	\$51,600
Moderate - \$16,480	19	\$323	\$452	\$61,920
Above moderate - above \$15,480	26	above \$323	above \$452	above \$61,920

Source: Lake County Planning Department and HCD.

1. Rent to gross income ratio
2. Assumes a Gross Annual Income Multiplier of 4

Although the availability of rental housing is considered to be limited, especially during the vacation season, the market place provides for a diversity of rental units at affordable prices. A sample of rental prices was compiled by the Planning Department in 1981 and is shown on Table IV-18.

TABLE IV-18
RENTAL HOUSING PRICES

<u>Type of Unit</u>	<u>Price Range</u>
Trailer in Trailer Park	\$110 to \$125
Cottage/Studio Apartment	\$ 90 to \$225
Mobile Home	\$200 to \$300
Single Family (1 bath, 1 bedroom)	\$150 to \$235
Single Family (2 bedrooms, 1 bath)	\$210 to \$375
Single Family (3 bedrooms, 2 baths)	\$375 to \$550

Source: Lake County Planning Dept., 1981.

Housing Prices

Housing prices vary tremendously within the County both by location and by housing type and size (See Table IV-19). The information compiled by the County Planning Department survey clearly demonstrates the importance of mobile homes as a means of meeting the housing needs of the County's low and moderate income households. With 55% of the households earning at or below the median income, mobile homes and other manufactured housing represent the most viable means of providing decent housing in a suitable living environment.

Housing prices are a result of the complex interaction among numerous variables including the cost of time (processing delays), the cost of land (unavailability of adequate sites), the cost of construction, and the cost of money. The cost of time is especially significant with the present high costs of financing.

The processing of development proposals in Lake County appears not to constitute a major cost factor compared with other counties. As shown in Table IV-20 the cost of securing permits necessary in the planning process is considerably lower than surrounding governments, especially in tentative subdivisions. The time factor for EIRs in Lake County is cast in the same time frame requirements under State law as other surveyed communities.

The period of time required for permit approval in Lake County is the same, or slightly less than the period required for approval in other agencies. Although the California Environmental Quality Act in the local review process is scheduled concurrently with other permit processes, the scope of the development plays a large part in the time necessary for processing. Unusually large projects may involve additional environmental review that may delay construction and add considerably to the final cost of a single residential unit.

Construction Costs

Construction materials and labor cost together represent an estimated 56% (the largest proportion) of the purchase price of a single family residence. Typically, the cost of materials and labor in constructing an "average" wood frame single family unit runs between \$35 - \$45 per square foot.

Finance Cost

Interest rates affect the price of a residential unit in two ways. First, a developer obtains construction financing, usually for one year at interest rates equal to or exceeding the prime interest rate. The cost of borrowing money is passed on to the buyer in the form of a higher selling price of the unit.

The second way a unit price is affected through the interest rates at which a prospective homeowner can borrow in order to secure a mortgage on the property. The conventional mortgage interest rate in the fall of 1981 was about 16.5% and, as illustrated in Table IV-21, households would be required

TABLE IV-19

HOUSING VALUE DATA
(Average Figures)

<u>Area</u>	<u>Bedrooms</u>	<u>Bath</u>	<u>Rooms</u>	<u>Land Size</u>	<u>Price</u>
1. Glenhaven					
a. Residential	2	2	5	Varies	\$74,036
b. Mobile Home	2	2	6	Varies	44,318
c. Country	3	2	7	12 Ac.	375,666
d. Waterfront	2	2	5	Varies	91,583
2. Clearlake Park					
a. Residential	2	1	5	Varies	\$87,321
b. Mobile Home	2	1	5	Varies	34,100
c. Waterfront	2	1	5	Varies	147,320
3. Clearlake					
a. Residential	2	1.5	6	Varies	\$64,843
b. Mobile Home	2	2	5	Varies	39,770
c. Country	3	1.5	8	17.5 Ac	202,475
d. Waterfront	3	2	7	Varies	151,316
4. Lower Lake					
a. Residential	3	2	7	Varies	\$73,966
b. Mobile Home	2	1.5	5	Varies	40,037
c. Country	2	2	6	5 Ac	104,906
d. Waterfront	2	2	5	Varies	76,750
5. Riviera Area					
a. Residential	2	2	7	Varies	\$77,483
b. Mobile Home	2	2	6	Varies	53,000
6. Middletown Area					
a. Residential	2	2	5	Varies	\$84,425
b. Mobile Home	2	1	5	Varies	42,950
c. Country	2	2	6	18.5 Ac	122,500
7. Cobb Mt. Area					
a. Residential	2	1	6	Varies	\$55,500
8. Lakeport					
a. Residential	2	2	6	Varies	\$98,800
b. Mobile Home	2	1	5	Varies	45,971
c. Country	3	2	6	Varies	145,898
9. Nice/Lucerne					
a. Residential	2	1	5	Varies	\$78,392
b. Mobile Home	2	1	5	Varies	35,056
c. Country	2	2	4	Varies	110,000
10. Kelseyville					
a. Residential	3	2	6	Varies	\$84,443
b. Mobile Home	2	1	5	Varies	29,580
c. Country	2	1	6	Varies	120,994
11. Upper Lake					
a. Residential	2	1	6	Varies	\$76,642
b. Mobile Home	2	1	5	Varies	17,316
c. Country					141,927

Source: Lake County Planning Department, 1981.

TABLE IV-20

COMPARISON OF DEVELOPMENT PROCESSING TIMES AND FEES
JANUARY 1980

Process Fees	Lake		Yolo County		Sacramento County		Solano County		Colusa County		Sutter County	
Use Permit	8 wks	\$75	8 wks	\$75	6-8 wks	\$355	4-5 wks	\$450	60 days	\$50	4 wks	\$75
Variance	8 wks	\$50		\$75		\$199		\$150		\$50		\$75
Rezoning	8-12 wks	\$100	8 wks	\$250	4-6 wks	\$709	12 wks	\$500+ \$5/acre	90 days	\$100	2-3 months	\$175
General Plan Amendment	6 mos.	\$100	16 wks	\$400	6-12 months	\$872	6-9 months	\$200 initial fee	6 months	\$50	6-12 months	no chg
Tentative Subdivision	8 wks	\$50+ \$1/lot		\$200+ \$5/lot		\$579		\$700+ \$6/lot		\$50+ \$3/lot		\$175
Parcel Map	8 wks	\$235	8 wks	\$75+ \$5/lot	2 months	\$259	3-4 wks	\$300+ \$30/lot	30 days	\$40+ \$5/lot	6 wks	\$125
Initial Environmental Assessment Negative Dec.	4 wks	\$100/m	3-4 wks c	\$50	depends on project	\$200- \$300	3-4 wks c	\$150- \$250	c	\$25	c	\$60+ \$5/lot
	depends on project	\$100/m	2-4 wks c	\$400+	depends on project	\$30/hr in house	depends on project	\$500 deposit cost of consult +20%	min. 3 months	consult cost	9-12 months	\$200 consult fees

c - concurrent with other actions; ¹\$10/lot over 10 lots; ²\$14/lot over 20 lots; ³\$2/lot up to 100 then \$1/lot; ⁴\$90+ staff and consultant cost
Source: Survey of Processing Times and Fees, Yolo County Community Development Agency, January 1981.

to pay a monthly mortgage payment of \$692.58 on a \$50,000 loan over a 30-year amortization period. This same loan would require a monthly mortgage payment of only \$592 if a 14% mortgage interest rate prevailed. Table IV-21 presents the monthly mortgage payments (principal and interest) required for four loans at varying amounts amortized over a 30-year period. Unfortunately, interest rates have fluctuated and most private housing analysts predict that double-digit mortgage rates are here to stay.

Land Suitability

Land suitable for residential development in Lake County has been determined by analyzing a number of factors which either present opportunities or constrain development potential. The factors used in this analysis included hazards, both natural and man-made, and natural resources. Also considered was the availability of public service and infrastructure, and the cost of extending services to outlying areas.

Whereas substantial areas of the County may never be served by "community" sewer and water systems, it has been the County's policy to permit development in remote areas that can function using wells and septic tank systems. Thus the County's policy has broadened the opportunities for development of a range of sites for housing.

The Land Use Element projects 1,525 acres designated for urban development, 13,727 acres for suburban, 11,079 acres for suburban reserve, and 46,000 acres for rural residential development. In summary, the projected population level for the year 2000 has been allocated sufficient areas for development.

The analysis revealed large land areas of moderate and high development suitability exist within Lake County. In total 37,080 acres of vacant land have a high development suitability and 77,520 acres have a moderate development suitability. The County has not identified any area which would be eligible or desirable for redevelopment. The following is a brief analysis of land suitability by County study area:

- Lakeport subarea was found to have a large area of land with high suitability for development directly north of the City of Lakeport. This northern area has existing sewer and water facilities and is currently zoned and designated for high intensity residential development.
- Lake Pillsbury subarea was not analyzed due to the extensive federal ownership patterns. This area does not have County sewer or water facilities and the private lands are generally zoned for low intensity residential development.
- Upper Lake subarea contains highly suitable land for development located in scattered rural areas in the northwest section of the subarea. Inaccessibility to these areas and lack of developed water resources are its primary limitations.

TABLE IV-21
MONTHLY MORTGAGE PAYMENT
(PRINCIPAL AND INTEREST)
30 YEAR AMORTIZATION

<u>Amount of Loan</u>	<u>\$50,000</u>	<u>\$75,000</u>	<u>\$100,000</u>	<u>\$125,000</u>
Interest Rate				
14.0%	592.00	888.66	1,184.88	1,481.09
14.5%	612.28	918.42	1,224.56	1,530.70
15.0%	632.23	948.34	1,264.45	1,580.56
15.5%	652.26	978.39	1,304.52	1,630.65
16.0%	672.38	1,008.57	1,344.76	1,680.95
16.5%	692.58	1,038.87	1,385.15	1,731.44
17.0%	712.84	1,069.26	1,425.68	1,782.10
17.5%	733.17	1,099.75	1,466.33	1,832.91
18.0%	753.55	1,130.32	1,507.09	1,883.86

Source: Payment Tables for Monthly Mortgages and FHA Factors Publication No. 1031, Delphi Information Sciences Corp.

- The eastern lake subarea contains only a small amount of land suitable for development, most of which is located at the eastern end of High Valley. Topography and inaccessibility present the greatest constraints. Also extensive area is publicly owned. Currently, this area has a surplus of lots, whose only limitations are the expansion of sewer and water systems.
- Extensive areas of high and moderate development suitability exist within the southeastern lake subarea. The majority of these lands surround the larger urban areas of the City of Clearlake and Lower Lake. Water and sewer facilities are undergoing expansion.
- The Big Valley subarea has been assigned a low suitability rating because of the importance of protecting prime agricultural soils.
- The Middletown subarea has scattered sites suitable for development with limited access.

Housing Need

This housing element provides policy and program direction to the fulfillment of "unmet" housing needs in the County. Generally, the current unmet housing needs can be defined as a composite the following:

- The number of dwellings which are substandard and in need of rehabilitation is 3,773 units, or 16.4 percent of the total units in the County.
- The number of dwellings which are dilapidated and in need of replacement is 299 units, or 1.3 percent of the total units in the County.
- The number of dwellings in which the occupants are overcrowded (household with more than 1.01 persons per room) is 912 units, or 6 percent of the total units in the County.
- The number of households in which the occupants are paying a disproportionate share of their income for shelter (customarily defined as 25 percent but may extend to 35 percent for the elderly) is 2,220 households, or 14.6 percent of the total number of households in the County.

Statistically there exists a significant correlation between units which are substandard, units which are over-crowded, and units which are occupied by households paying more than one quarter of their incomes for shelter. It is usually the case that most substandard housing is occupied by households with low and moderate incomes and that most of the households in a community paying more than 25 percent of their incomes for housing also have low or moderate incomes. Thus, there exists a high degree of "overlap" between substandard units and overpayment. Another area of "overlap" occurs where overcrowded units are occupied by low and moderate income persons, and where many overcrowded units are in substandard condition.

With the current population level for the entire County at 36,366 (1980), two population projections were prepared for the years 1985, 1990, and 2000. These projections bound a probable range of population growth,

In the next five years, it is projected that the housing industry must provide between 2,804 and 3,505 dwelling units in order to accommodate the County's permanent residential demand (Table IV-22). At the same time, the housing industry will continue to service the demand for seasonal "second homes".

PROJECTED HOUSING NEEDS

	Existing <u>1980</u>	1980- <u>1985</u>	1985- <u>1990</u>	1990- <u>2000</u>	Cumulative Total <u>Year 2000</u>
<u>Low Projection</u>					
Single-Family	14,429	2,383	2,859	7,550	27,221
Multifamily	1,086	421	505	1,332	3,344
Other		897	1,076	2,852	4,815
Total	15,515	3,701	4,440	11,724	35,380
<u>High Projection</u>					
Single-Family	14,429	2,979	3,723	10,473	31,604
Multifamily	1,086	526	657	1,848	4,117
Other		1,122	1,402	3,943	6,467
Total	15,515	4,627	5,782	16,264	42,188
Assumptions:	Low Projection = 4.9% Average Annual over 20 years High Projection = 6.6% Average Annual over 20 years Household Size = 2.5 persons per dwelling unit 85% of households = single-family 15% of households = multifamily Vacancy Allowance = 5% Other = factors to account for replacement of dilapidated units and to maintain proportion of recreational units to permanent units at 30 percent.				

IV-71

Fair Share Needs

The County must assume responsibility for providing a "fair share" of the housing needs within its general housing market area. In essence, a "fair share" would be the number of market and nonmarket households which a given city or unincorporated area should plan to address through its housing program.

Since Lake County as a whole constitutes its own "housing market area" the basic definition of need has been applied equally throughout the County. Consequently, the State Department of Housing and Community Development has determined that the County does not need to prepare a Fair Share Allocation Plan.

Objectives and Policies

The following policy areas are discussed:

1. Affordable housing,
 2. Reducing the costs of housing,
 3. Housing for senior citizens,
 4. Maintenance of existing housing,
 5. Innovative techniques, and
 6. Open housing opportunities.
- 1. To actively support and encourage the use of programs aimed at providing affordable housing for low- and moderate-income households.**
- 1.1 The County should publicly announce and disseminate information on the availability of various federal housing programs. Particular emphasis should be placed on the following programs:
- Farmers Home Administration - Section 515: Rural Rental and Cooperative Housing Loans;
 - Federal Housing Administration - Section 231: Rental Housing Insurance for the Elderly and Handicapped;
 - Federal Housing Administration - Section 221(d)(3): Rental Housing for Low- and Moderate-Income Families;
 - Farmers Home Administration - Section 523 and 524; Rural Self Help Housing Technical Assistance;
 - Housing and Urban Development - Section 213: Cooperative Housing;
 - Housing and Urban Development - Section 235: Homeownership Assistance for Low- and Moderate-Income Families.

A description of these programs, their sponsors and their intent is provided in the Technical Appendices.

- 1.2 The County will encourage those private developments which specifically address identified needs for new rental units and additional housing units suitable for the low and moderate income groups, especially the elderly and handicapped.
- 1.3 The County should investigate the feasibility of establishing a Redevelopment Agency for the improvement of housing conditions. The agency, under the State Redevelopment Construction Loan Act, would be able to issue revenue mortgage bonds for the purchase of existing affordable housing by low- and moderate-income households. The agency would issue the tax exempt bonds to provide below market rate interest mortgage financing for both sales and rental units.
- 1.4 The County should actively support the state administered Section 8 Rental Assistance Program and seek an expansion of the program in the County by requesting assistance from the State Department of Housing and Community Development. The program enables participants to receive rental supplements that make up the difference between what the low income household can afford and what the fair market rent is for an adequate housing unit.
- 1.5 The County should formally pass a resolution endorsing efforts to increase the mortgage-paying ability of low-income/fixed income residents by encouraging homeowner property tax relief.
- 1.6 After the approval of an Article 34 referendum the County should seek available funds from the \$100 million program enacted by the State (SB 229/AB 333) to provide financial assistance in the construction of units (Rental Housing Construction Program) and in the purchase of units (Homeownership Assistance).
- 1.7 The County should prepare and adopt a Housing Assistance Plan in order to qualify for federal funds for housing and community development programs.
- 1.8 The County should try to combine federal and state programs to make the best use of available funds and to maximize assistance to low- and moderate-income households. The County should promote these efforts through leveraging (using one type of available funding for a project to generated additional funds from other sources) and piggybacking (combining a number of programs to make a project feasible).
- 1.9 The County should support and promote programs to facilitate the financing of mobile home purchases. The following program is particularly appropriate: California Department of Housing and Community Development equity sharing program, in which the state agency will provide up to 49 percent of the purchase price to households who wish to purchase rental housing that is being converted to condominiums or cooperative ownership, to

households who wish to purchase mobile homes not located within mobile home parks, and to nonprofit and stock cooperative corporations, and to households who wish to purchase shares in a cooperative corporation.

- 1.10 The County should assist in the creation of nonprofit housing development corporations and housing cooperations by providing interested groups with technical assistance.
 - 1.11 The County should support placing an Article 34 referendum on a ballot prior to 1987, which is required by State law in order for low rent housing projects to be developed, constructed, or acquired by a state public body (including the County.)
2. **To investigate and promote methods of reducing the costs of providing housing.**
- 2.1 During the revision of the zoning ordinance to make it consistent with the general plan, the County should revise the ordinance to make it easier to understand, to eliminate conflicts and duplications, and to provide flexibility. At the same time, where infrastructure (roads, water lines, sewerage, etc.) have sufficient capacity, reduced lot sizes and higher densities should be seriously considered.
 - 2.2 The County should maintain those standards in all buildings codes that reasonably increase and maintain the public, health, welfare, and safety; but should review its codes to eliminate those standards that do not accomplish these goals. Public health, welfare, and safety standards are necessary for water quality, fire protection, and seismic safety.
 - 2.3 The County should review its environmental protection guidelines, promulgated to implement the California Environmental Quality Act, and suggest revisions to streamline processing.
 - 2.4 The County should coordinate its review process of development proposals in order to reduce the time required to process an application.
 - 2.5 The County should adopt a cluster ordinance which will provide density increase entitlements for proposed developments which either reserve at least 25% of the units for low and moderate income families or offer other cost-saving design innovations (in compliance with California Government Code Section 65915).
3. **To concentrate efforts on the provision of adequate and affordable housing for the County's senior citizens.**
- 3.1 In addition to the programs that are appropriate for assisting low- and moderate-income households, the County should actively encourage the use of the following programs:

- California Franchise Tax Board - Renter's Assistance Program, Renters Credit Program and Property Tax Assistance Program.
 - U.S. Department of Housing and Urban Development - Section 202: Direct Loans for Housing for the Elderly or Handicapped.
 - California Department of Housing and Community Development - Demonstration Elderly Housing Rehabilitation Program.
- 3.2 The County should maintain a list of elderly who would be interested in participating in a share-a-house program, which would match an elderly person with another compatible person seeking housing.
4. **To preserve the County's existing stock of housing that is in good condition and to encourage the use of programs that assist in the rehabilitation of those units that are deteriorating.**
- 4.1 The County should actively promote the flow of information about available home repair loan and grant programs. The County should emphasize the following programs:
- Housing and Urban Development - Section 312: Rehabilitation Loans.
 - California Housing and Community Development Apartment - Deferred Payment Rehabilitation Loan Program.
 - California Housing Financing Agency - Direct Loans.
 - Farmers Home Administration - Section 502: Homeownership and Rehabilitation Loans.
 - Farmers Home Administration - Section 504: Home Repair Loans and Grants.
- 4.2 The County should actively assist individuals, agencies, and developers wishing to become involved in rehabilitation projects.
- 4.3 The County should prepare community plans for its unincorporated communities and conduct housing inspections to identify target areas for rehabilitation.
- 4.4 The County should cooperate with school districts to encourage local high schools to establish programs enabling students to gain practical experience in home construction and repair.
5. **To promote the use of innovative construction techniques that emphasize a variety of housing types that are energy efficient at low construction costs.**

- 5.1 The County should actively participate in the California weatherization program for low- and moderate-income households.
- 5.2 The County should promote the use of energy efficient building design, site planning, and community layout in all residential development through revisions to existing building codes, and subdivision regulations.
- 5.3 Solar and geothermal energy should be considered in the siting and design of residential developments. Where practical, developers should be encouraged to examine the applications of active and passive solar design and of space heating with geothermal energy.
- 5.4 The County should investigate the feasibility of developing a geothermal power and/or hot water source.
- 5.5 The County should work with local developers to promote innovative housing, using inexpensive housing design techniques, including modular housing, panelized homes, and site-built homes.
- 5.6 The county should adopt an ordinance which will provide incentives, such as density bonuses, to developers offering design innovations, increasing the predictability of lower maintenance and/or utility costs pursuant to policies 5.2, 5.3, 5.4, and 5.5.
- 6. To insure housing opportunities for all persons, regardless of sex, race, ethnic background, physical condition, or family size.**
 - 6.1 The County should discourage any discrimination in housing (based on race, color, religion, sex, family size, martial status, national origin, or any other arbitrary factors) through formal resolution passed by the Board of Supervisors.
 - 6.2 The County should encourage lending institutions to participate actively in financial programs intended to assist low- and moderate-income groups.

Because of recently enacted housing laws, it is imperative that cities and counties clearly outline their action programs to accomplish the housing policies expressed in their Plan. Accordingly, Table IV-23, showing the specific actions the County should take, is presented here for easy reference, as well as in Chapter VI, Implementation.

TABLE IV-23

HOUSING IMPLEMENTATION

<u>POLICY</u>	<u>PROGRAM INITIATOR</u>	<u>PROGRAM IMPLEMENTOR</u>	<u>ACTION</u>	<u>PROGRAM FINANCING</u>	<u>TIMING</u>
I. PROVIDE AFFORDABLE HOUSING					
I.1	Board of Supervisors	Planning Dept.	Inform local newspapers, provide program description to developers, place in local libraries, cooperate with local lending institutions.	N/A	Once a year
I.2	Private developers	Private developers and/or HUD, FmHA, non-profit sponsors with assistance from Co. Planning Dept.	The County will assist in the identification of suitable project sites and substantiating the need for such housing; the County will welcome technical assistance from appropriate non-profit state and federal agencies.	HUD & FmHA	Immediately
I.3	Board of Supervisors	Board of Supervisors	Investigate feasibility of establishing a redevelopment agency and conduct local referendum.	N/A	Prior to 1984

TABLE IV-23 (Continued)

<u>POLICY</u>	<u>PROGRAM INITIATOR</u>	<u>PROGRAM IMPLEMENTOR</u>	<u>ACTION</u>	<u>PROGRAM FINANCING</u>	<u>TIMING</u>
I.4	Board of Supervisors or private developer	Private developers and HCD, with County staff assistance	Work closely with private developers and non-profit corporations (such as Rural Communities Housing Development Corp.) interested in seeking HCD funds for Section 8 developments. Provide staff assistance for writing proposals and finding appropriate construction sites. Goal: Assist through permit stage one development project every 2 years (Average 35 to 45 units/project).	HCD, HUD, and private developers	Within 2 years
I.5	Board of Supervisors	Board of Supervisors	Pass resolutions.	N/A	As state legislation is introduced
I.6	Board of Supervisors	Board of Supervisors	Apply for housing grants and loans.	HDC (SB229/ AB 333)	18 months
I.7	Planning Dept. in conjunction with Area Wide Planning Council	Board of Supervisors, non-profit agencies, HCD, HUD, Area Wide Planning Council w/Co. staff assistance	Prepare HAP document.	County general fund for Plan prepared by staff.	Immediately

TABLE IV-23 (Continued)

<u>POLICY</u>	<u>PROGRAM INITIATOR</u>	<u>PROGRAM IMPLEMENTOR</u>	<u>ACTION</u>	<u>PROGRAM FINANCING</u>	<u>TIMING</u>
I.8	Board of Supervisors	Board of Supervisors	Provide staff assistance in dissemination of information and work with parties to coordinate activities.	Staff assistance through G.F. and individual programs	1 year
I.9	Planning Dept.	Planning Dept. in conjunction with HCD, non-profit sponsors, and private developers	Inform local newspapers, provide program description to developers, place in local libraries. Actively seek persons eligible for the permanent mobilehome purchase program. Staff would aid in determining eligibility and applying for loans. Goal: Assist in the purchase of 30 units/year.	HCD	1 year
I.10	Board of Supervisors	Planning Dept.	Seek and distribute information from the Northern California Assn. for Non-Profit Housing. Make staff available to assist in funding proposals and applications.	General Fund	Immediately
I.11	Board of Supervisors	Planning Dept.	Place on ballot.	N/A	18 months

TABLE IV-23 (Continued)

<u>POLICY</u>	<u>PROGRAM INITIATOR</u>	<u>PROGRAM IMPLEMENTOR</u>	<u>ACTION</u>	<u>PROGRAM FINANCING</u>	<u>TIMING</u>
2. REDUCED HOUSING COSTS					
2.1	Planning Commission	Planning Dept.	Review, revise, hold hearings, including a land capacity/capability ordinance.	County General Fund	1 year
2.2	Board of Supervisors	Building & Planning Depts., Health & Fire Depts. & HCD.	Review, revise, and hold hearings.	County General Fund	Every 3 years
2.3	Planning Commission	Planning Dept.	Review and revise CEQA procedures.	County General Fund	1 year
2.4	Planning Commission	Planning Dept.	Hold workshops with other departments to design fast track systems.	County General Fund	Immediately after adoption
2.5	Planning Commission	Planning Dept.	Contact other communities with similar policy, conduct information workshops with Planning Commission and Board of Supervisors, hold hearings.	County General Fund	Within 1 year

TABLE IV-23 (Continued)

<u>POLICY</u>	<u>PROGRAM INITIATOR</u>	<u>PROGRAM IMPLEMENTOR</u>	<u>ACTION</u>	<u>PROGRAM FINANCING</u>	<u>TIMING</u>
3. HOUSING FOR SENIOR CITIZENS					
3.1	Board of Supervisors	Private developers and non-profit groups.	Inform local newspapers, provide program descriptions to local developers and non-profit organizations, make available in public places.	HUD, HCD	Once a year
3.2	Board of Supervisors	Planning Dept.	Establish a list to be distributed in public places and with social service agencies and a telephone line. Goal: 10-15 unit matches per year.	County General Fund	Once a year
4. REHABILITATION					
4.1	Board of Supervisors	Planning Dept.	Inform local newspapers, provide program description to local builders, make available in public places.	County General Fund	Once a year
4.2	Board of Supervisors	Private developers and non-profit groups with County staff assistance	Inform local newspapers, provide program description to local builders, place in public places, and help non-profit sponsors with program funding application.	CA Housing Finance Agency	Once a year

TABLE IV-23 (Continued)

<u>POLICY</u>	<u>PROGRAM INITIATOR</u>	<u>PROGRAM IMPLEMENTOR</u>	<u>ACTION</u>	<u>PROGRAM FINANCING</u>	<u>TIMING</u>
4.3	Board of Supervisors	Building Dept., Planning Dept., Health and Fire Depts.	Pass resolution author- izing program to identify sub-standard housing units by Build- ing Inspection.	County General Fund	Every 2 years
4.4	Board of Supervisors	County Board of Edu- cation	Pass resolution.	School District Funds	Immediately
5. INNOVATIVE/ENERGY EFFICIENT DESIGN					
5.1	Board of Supervisors	Non-profit groups	Apply for funds for staff expense to disse- minate information and set up programs through local non- profit groups. Goal: Process 30 requests per year.	Com. Deve., Blk. Grant, CA Dept. of Aging	Immediately
5.2	Planning Commission	Planning Dept., Build- ing Dept., Public Works Dept., Health and Fire Depts.	Review zoning, build- ing and subdivision regulations; distribute information to local developers.	County General Fund	Once every 2 years
5.3	Board of Supervisors	Planning Dept., Building Dept.	Work with Building Dept. in design of flyer explaining passive solar energy techniques. Include in Bldg. Permit Packet. Distribute press release.	County General Fund	Once a year

TABLE IV-23 (Continued)

<u>POLICY</u>	<u>PROGRAM INITIATOR</u>	<u>PROGRAM IMPLEMENTOR</u>	<u>ACTION</u>	<u>PROGRAM FINANCING</u>	<u>TIMING</u>
5.4	Board of Supervisors	Planning Dept.	Apply for grants to investigate feasibility of development of Direct Use (hot water) for residential uses.	U.S. Dept. of Energy	1982
5.5	Board of Supervisors	Planning Dept. Building Dept.	Distribute information.	County General Fund	Immediately
5.6	Board of Supervisors	Planning Dept.	Adopt density increase entitlement ordinance.	N/A	Immediately
6. OPEN HOUSING OPPORTUNITIES					
6.1	Board of Supervisors	N/A	Pass resolution.	N/A	Immediately
6.2	Board of Supervisors	Planning Dept.	Distribute information to local lending institutions.	N/A	Immediately

PUBLIC SERVICES

The rapid rate of growth experienced by Lake County over the past decade has left many of the County's public services straining to meet demand. Many of the public services are currently operating close to or exceeding capacity level. The purpose of the provisions contained in this section of the General Plan is to promote a pattern of development which maximizes the use of existing services while minimizing the costs of providing new facilities and services. The public services discussed in this section include water and sanitation, parks and recreation, schools, and libraries.

Water/Sanitation

Water. Lake County currently uses groundwater and Clear Lake for its domestic water supplies. The Lake County Public Health Department and the State Department of Health Services Sanitary Engineering Section regulates water supplies in the County. They enforce the Interim National Standards for Drinking Water as set by the Environmental Protection Agency. These standards are set for water pollutants in four broad areas: turbidity (clarity), inorganic chemicals (minerals), organic chemicals (pesticides), and microbiological levels (bacteria). According to the Lake County Public Health Department and water quality tests conducted by the State Department of Water Resources, Clear Lake does not meet the standards set for microbiological and turbidity levels in drinking water. Clear Lake water requires chlorination and in some areas specialized treatment for boron and other chemical properties.

Groundwater supplies in the County are usually of high water quality. However, many individual systems (those supplying a single house etc.) do not receive as uniformly high water quality as can be provided by a community water system with adequate treatment facilities.

Over 99 water distribution systems are registered with the County Health Department. Of the 15 largest water systems (those with over 200 connections), 6 systems obtain water only from Clear Lake, 7 systems have groundwater as their water source, and 2 use both Clear Lake and groundwater sources. Many of these larger water systems are at or close to capacity levels and will require expansion to their facilities to meet future water demand. Due to their small size, most existing water systems lack sufficient technical, management and financial capabilities to meet the growing water demand.

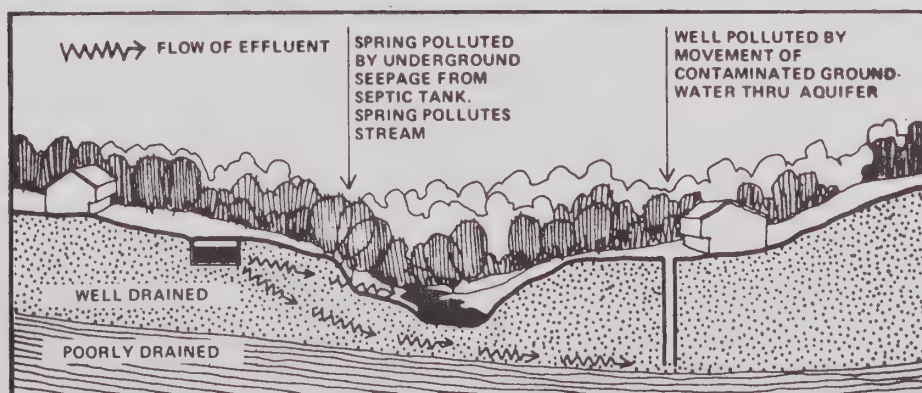
The County's existing water supplies also will need to be expanded to meet the future domestic, industrial, and agricultural water demand associated with increased population growth. Two groundwater basins, Big Valley and Scotts Valley, are currently showing signs of depletion. The appropriation of Clear Lake water rights to Yolo County and the construction of Little Indian Valley reservoir by Yolo County also places significant limitations on the County's available water supply. Several water projects and programs have been proposed in recent years to increase the County's water supply. Since much of the future development will occur in the area immediately surrounding Clear Lake, increased use of Clear Lake water will provide one

of the cheapest and most readily available sources of future water supply. Other water projects are described further in Working Paper #3 located in the appendix.

Wastewater Treatment and Disposal. Lake County has five wastewater treatment plants providing services to some of the more densely populated areas of the County. These wastewater systems include the Southeast Regional Wastewater System, Clearlake Oaks County Water District, the Southwest Regional Wastewater System, the City of Lakeport, and the Northwest Wastewater System. On the average these wastewater systems are operating at just over 50 percent capacity with expansions expected to be needed within the next five years. The five systems provide secondary wastewater treatment, the level of treatment required by the 1972 Federal Water Pollution Control Amendments. All wastewater systems have experienced violations of discharge requirements in the past due to inadequate storage capacity of their reservoirs to handle both effluent storage needs, and wet weather runoff and precipitation. Effluent has drained indirectly into Clear Lake during the rainy season, which is not allowed by the Regional Water Quality Control Board. However, corrective measures have been undertaken by all systems. Enlarged and new disposal areas have been recently completed at Northwest, Lakeport and Kelseyville.

The rest of the County relies on septic systems to dispose of wastes. Several areas in the County, including those in the vicinity of Upper Lake, Clearlake, and south of Lakeport, have experienced problems with septic tank failures. Figure IV-15 illustrates how improper siting and maintenance of these facilities may seriously affect the area's water resources. County Ordinance #418 has been adopted to help with the siting and regulation of septic tanks to alleviate such problems in the future.

Figure IV-15
WATER POLLUTION FROM SEPTIC
TANKS OR SEWER LEAKAGE



Source: U.S. Department of the Interior, Water Resources Protection Measures in Land Development - A Handbook, 1974.

Solid Waste Disposal. Disposal sites are classified according to the geologic and hydrologic features of the disposal area and the capability of protecting surface and groundwater quality. Class I sites must be designed to prevent the discharge of any wastes to useable waters. Class II sites, of which there are two categories, may be in proximity to or have hydraulic continuity with usable water. Class III sites include disposal areas which intercept groundwater or where wastes may be dumped into waters. All solid wastes generated in the County are dumped at the County-operated Class II Clearlake Highland Landfill located at the end of Davis Street off Highway 53. While the County does not have a large Class I site, the Clearlake Highlands Landfill has a small area designated to qualify for this classification. The landfill is approximately 61 acres and handles 100 tons of wastes per day during peak summer months. The life expectancy of the site is 75 years (from 1980).

Geothermal wastes can be divided into two general categories: the liquid generated from drilling sumps (composed mostly of mud, water, minerals, and oil) and hydrogen sulfide waste generated by electric power plants. Two privately-owned Class II-I dump sites located in the County handle geothermal-generated wastes. One of the sites is located outside of Middletown on Butts Canyon Road, 3.5 miles east of Highway 29. The site includes 410 acres, of which only 40 acres are in use. Approximately 500,000 to 600,000 barrels (42 gallons equal 1 barrel) per year are dumped at the site. The anticipated life expectancy of the site is 50 years (from 1980).

The second disposal site is located at 7620 Highway 29, outside of Kelseyville. The 140 acre site handles approximately 300,000 to 400,000 barrels per year and has an anticipated life expectancy of 10 years.

Structural Fires

Structural fires usually pose a more immediate threat to life than do wildland fires. In Lake County fire protection services are provided by eight local fire departments, the State Department of Forestry and the U.S. Forest Service (the latter two agencies primarily provide wildland protection services). The local fire departments include Lakeport Fire Department, Upper Lake Fire Department, Lucerne Park and Recreation District, Clearlake Oaks Fire Department, Spring Valley Fire Department, Lakeshore Fire Department, Lower Lake Fire Department, Kelseyville Fire Department, and Middletown Fire Department. All of these fire departments are composed largely of volunteer firefighters.

Many different factors must be considered when determining the degree of structural fire safety, including fire district boundaries, location of structure, type of structure and construction, the number and proximity of other structures, the fuel load in and around the structure, road access conditions, water supply, fire equipment, and the number of available fire fighters.

Structures that were built before the existence of the County planning department and without conformance to an electrical or building code can be considered potentially hazardous; areas with inadequate or non-existent

water systems; areas that have inadequate water reserves for both domestic use and firefighting purposes; and where substandard roads exist that make passage of fire equipment difficult, if not impossible.

Parks and Recreation

Lake County has 22 parks and recreation areas available year around for residents and visitors, making it an outstanding area for outdoor recreation. Recreational areas include forests, wildland areas, lakes, and creeks which offer such recreational opportunities as hiking, picnicking, hunting, boating, fishing, and swimming. These areas are also important for the open space and scenic values they provide to the County. Table IV-24 lists all the parks and recreation areas, their location, and available facilities. Figure IV-16 shows their location on a County map.

Four of these parks provide most of the available park and recreation acreage: Mendocino National Forest, Clear Lake State Park, Boggs Mountain State Forest, and Highland Springs Recreational Area. These parks have ample land to meet the current and future recreational demand for regional parks. However, as the County's population increases and existing communities expand geographically, there will be a need for more neighborhood and city parks and recreation areas within close distance (1/4 - 1/2 mile) to residential areas. Increased demand for access to Clear Lake and its shoreline will also result from increased permanent and visitor populations. The development of new park and recreation areas along the lake's shoreline is one method which could be used to meet this demand.

Schools

Lake County is divided into seven school districts including: Kelseyville Unified School District, Konocti Unified School District, Lakeport Unified School District, Lucerne Elementary School, Middletown Unified School District, Upper Lake Elementary School, and Upper Lake Union High School. All school districts have experienced an influx of new students in recent years, causing many schools to reach or exceed capacity enrollment levels (refer to Table IV-25 for school enrollment and capacity figures). To help increase their capacity levels, most of the districts are using temporary facilities, including mobile units and rented rooms.

The primary concern of the County's school districts is the need for future expansion and improvements to existing facilities in order to accommodate the projected increase in student population. A school district's income is no longer affected by the fluctuation of the local assessed valuation. The bulk of a school district's funding comes from the state; however, income is calculated such that as local tax revenues grow, the state contribution decreases. The net result to the school district is a fixed revenue level. There is not an ongoing state or local source of revenue for school capital outlay purposes. To the extent that revenues for capital outlay, such as new school buildings and buses to provide for the needs of increasing numbers of school children, from state and local sources is inadequate, impact mitigation should be required of new subdivision development. Most districts have applied for and, in some cases, received state financial assistance under the Leroy Greene Act to institute building programs.

TABLE IV-24

PARKS AND RECREATION FACILITIES

<u>Name</u>	<u>Location</u>	<u>Facilities</u>
Mendocino National Forest (Federal)	North of Clear Lake on the eastern side of Pacific Coast Range (240,000 acres)	BBQ, picnic area, hiking, camping, hunting fishing, boating, swimming, horseback riding, trailer sites, rest rooms
Cow Mountain (Federal)	West of Clearlake (60,000 acres)	Picnic area, hiking, camping, hunting, horseback riding, ORV use
Walker Ridge (Federal)	East of Indian Valley Reservoir (40,000 acres)	Picnic area, hiking, camping, hunting, horseback riding, ORV use
Clear Lake State Park (State)	5300 Soda Bay Road North of Kelseyville (565 acres)	BBQ, picnic area, hiking, camping, hunting fishing, boating, swimming, horseback riding, trailer sites, rest rooms
Boggs Mountain State Forest (State)	Between Hoberg's Resort and Cobb (34,600 acres)	Picnic areas, camping (no improved campgrounds), hunting
Highland Springs Recreation Area (Lake County Flood Control)	6 miles south of Lakeport (2,500 acres)	BBQ, picnic area, lawn area, swimming, rest rooms
Middletown Park and Pool (County)	Middletown (3.42 acres)	BBQ, picnic area, swimming, tennis, rest rooms
Lower Lake Park (County)	One block north of Main Street between Mill and Adams Street, Lower Lake (0.8 acres)	BBQ, picnic area, meeting hall, rest rooms

TABLE IV-24 (Continued)

<u>Name</u>	<u>Location</u>	<u>Facilities</u>
Redbud Park (County)	Clearlake (13 acres)	BBQ, picnic area, meeting hall, senior citizens hall, lake front access, boat launch, pier, fishing, tennis, baseball, rest rooms
Oaks Beach (County)	Clearlake Oaks on Clear Lake, east of Highway 20 (1.1 acres)	BBQ, picnic area, lake front access, pier, fishing, rest rooms
Oaks Plaza (County)	Clearlake Oaks	Picnic area, BBQ
Austin Park (County)	Clearlake on Clear Lake (4 acres)	Picnic area, lakefront access, fishing, rest rooms
Nice Keeling Clubhouse (County)	Nice (1 acre)	BBQ, picnic area, meeting hall, lake front access, boat dock and launch, pier, fishing, rest rooms
Nice Community Beach (County)	Nice on Clear Lake (2 acres)	Lake front access, pier, fishing
Hinman Park (County)	Clearlake Villas, Nice	Baseball
Lucerne Park (County)	6225 E. Highland, Lucerne (4.49 acres)	Lake front access, fishing pier, boat launch, picnic area, BBQ, rest rooms
Lucerne Alpine Park (County)	Lucerne on Clear Lake (2 acres)	BBQ, picnic area, lake front access, fishing, rest rooms
Lucerne Clubhouse Beach	Lucerne on Clear Lake (150' X 200')	Picnic area, meeting hall, lake front access, fishing, rest rooms

TABLE IV-24 (Continued)

<u>Name</u>	<u>Location</u>	<u>Facilities</u>
Upper Lake Park (County)	South side of Highway 20, adjacent to east bank of Middle Creek (12.5 acres)	None
Shoreline Community Park (County)	North of Lakeport	Undeveloped
Hamilton Boat Ramp (County)	Crystal Lakeway, Lakeshore Blvd., North Lakeport	Boat launch
Westshore Pool	250 Lange St., Lakeport (1.9 acres)	Public pool
Lakeside Park (County)	On Clear Lake near Kelseyville (53 acres)	BBQ, picnic area, lake front access, boat ramp, fishing, rest rooms
Pioneer Mini Park	5250 3rd St., Kelseyville (0.54 acres)	BBQ, picnic area
Bridge Arbor (County)	Upper Lake	BBQ, picnic area
Library Park (City of Lakeport)	Lakeport (3 acres)	Picnic area, lake front access, tennis courts, rest rooms
Old Courthouse Restoration	Main Street, Lakeport	

Source: County Parks Department

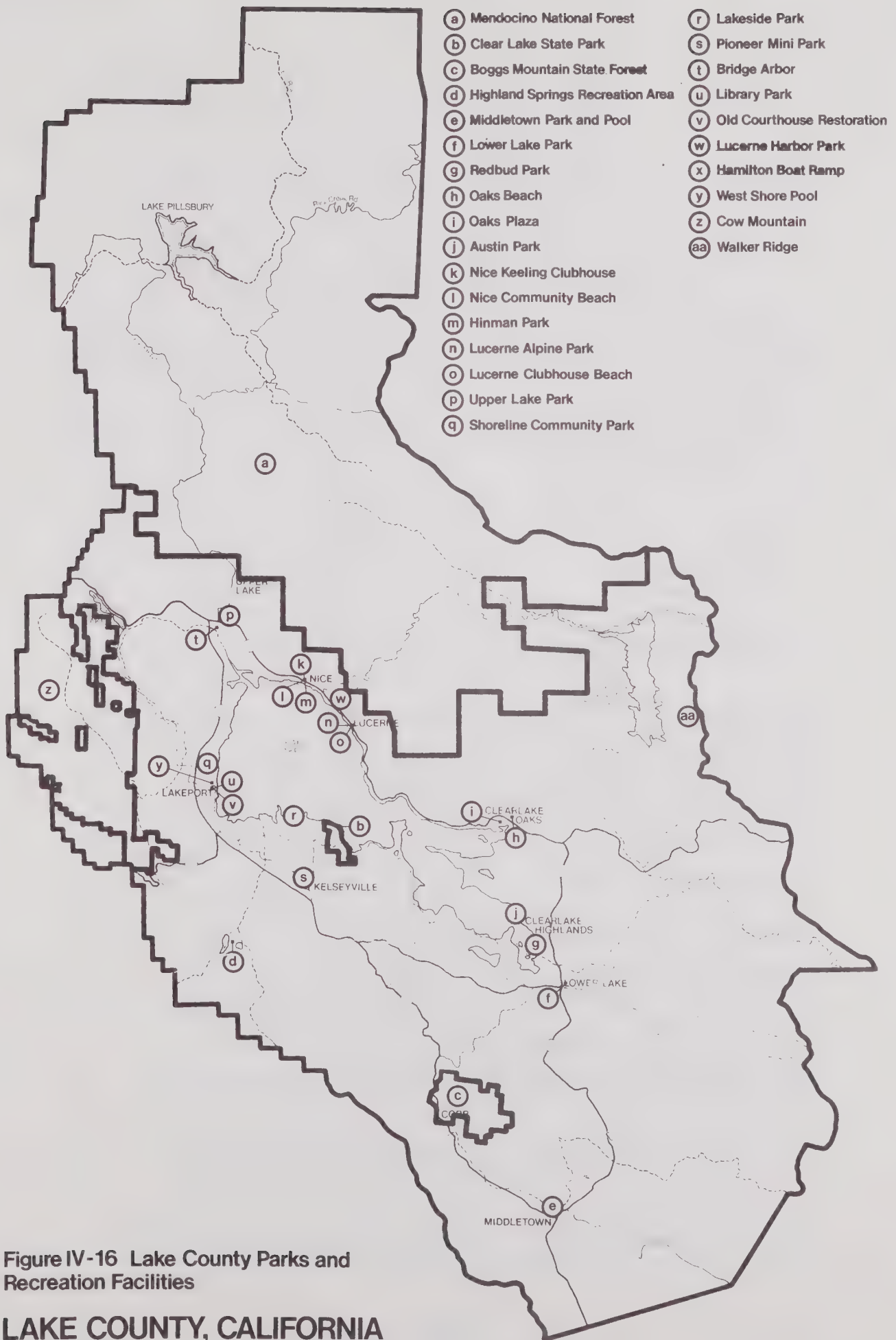


TABLE IV-25
SCHOOL ENROLLMENT AND CAPACITY LEVEL

<u>District/School</u>	<u>Current Enrollment*</u>	<u>Capacity</u>
Kelseyville Unified	1,112	
Kelseyville Elementary (K-6)	522	495
Kelseyville Intermediate (7-8)	240	210
Kelseyville High (9-12)	330	540
Kelseyville Continuation	20	30
Konocti Unified	2,260	
East Lake (K-4)	150	150
Burns Valley (K-4)	600	400
Oakville (4-6)	425	375
Lower Lake Junior High	325	300
Lower Lake High (9-12)	700	550
Lower Lake High Continuation (9-12)	60	**
Lakeport Unified	1,355	
Lakeport Elementary (K-4)	483	442
Terrace School (5-8)	424	422
Clear Lake High (9-12)	423	415
Natural High Continuation (9-12)	25	30
Lucerne Elementary	175	210
Middletown Unified (K-12)	550	580
Upper Lake Union Elementary	425	475
Upper Lake Union High	300	***

* Projected fall 1980 enrollment (8/80).

** Mobile unit, no capacity given.

*** Operating close to capacity with 25-30 students per class.

Library

The Lake County Library operates the four libraries:

Lakeport Library (main branch)
200 Park
Lakeport, California

Redbud Library
Golf Avenue
Clearlake, California

Middletown Library
Calistoga and Collayomi
Middletown, California

Upper Lake Library
310 2nd Street
Upper Lake, California

The library also operates a bookmobile service which makes 19 stops throughout the County and is a member of the North Bay Cooperative, an inter-library book exchange system.

Objectives and Policies

The following policy areas are discussed:

1. Water and Sanitation
 2. Structural Fires
 3. Parks and Recreation
 4. Schools
-
1. **To ensure a safe means for waste disposal and protect the County's water resources for the public's health and safety.**
 - 1.1 A Master Water Plan should be prepared and adopted, and should be based on and serve to implement the County's adopted General Plan. The Plan should address the location quantity and quality of existing water resources; evaluate potential supply sources in terms of yield, cost, and environmental impact; identify inconsistencies between projected development rates and future water availability and provide the institutional and financial mechanisms for future development and management of the County's water resources.
 - 1.2 The County should encourage the use of water conservation techniques appropriate for new and existing development. Such techniques includes requiring low flush toilets, installing flow restrictors in showers, repairing leaky fixtures and promoting drought resistant, low maintenance vegetation.
 - 1.3 The County should enforce adequate standards for septic tanks (including minimum) to protect water quality and public health.
 - 1.4 The County should promote and support programs to educate homeowners on the care and maintenance of septic systems.
 - 1.5 The County should investigate alternative rural wastewater systems before investing in a costly conventional sewage system. For individual homes, such systems include elevated

leach fields, sand filtration systems, evapotranspiration beds, osmosis units and holding tanks. For clusters of homes, alternative systems include communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment.

- 1.6 The County should investigate hazardous waste disposal needs to ensure adequate waste disposal capabilities for anticipated geothermal and agricultural toxic wastes.
 - 1.7 The County should not promote the formation of additional water distribution systems except where economically and technically justified.
 - 1.8 The County should encourage a program for the consolidation of small water distribution systems adjacent to designated communities in the County. (See land capacity/capability overview implementation policy for designated communities.)
 - 1.9 Provisions should be included in the County Ordinance (see Land Capability/Capacity overview policy section located in the Implementation chapter) promoting the use of standards requiring the development of sewer systems and connection of land uses to sewer systems where (a) failing septic tanks, leachfields, and package systems constitute a threat to water quality and public health that cannot be remedied otherwise; or (b) future development will exceed acceptable standards for septic tanks (such as density or flow of effluent into the groundwater).
- 2. To provide and identify sites for recreational facilities to serve the recreational and social interaction needs of the County's residents of all ages, economic situation, and physical conditions.**
- 2.1 Because the County already offers a number of park sites, the primary emphasis should be to insure that these facilities are well maintained and are adequately meeting the needs of the area served. To strengthen their role as community focal points, the County should provide meeting halls and recreational buildings to existing parks where feasible.
 - 2.2 Recreational areas for active outdoor sports, such as baseball/softball and horseshoes, for play areas and for playground apparatus should be provided either in existing parks or as part of new ones.
 - 2.3 Community parks should be provided to meet the active and passive recreational needs of both urban and rural communities, as well as to serve as a focal point for social interaction and education. Uses that should be considered include: softball/baseball fields, multiple-use paved areas, playground apparatus, sitting areas, and community center/recreation buildings. Other specialized uses or activities may be permitted depending on the demand of the community served. The following guidelines should be observed in locating these parks:

- centrally located to serve as much of a population base as possible, within a 3 mile radius;
- at the intersection of major and/or minor collectors to facilitate access;
- along designated bicycle routes;
- along transit lines; and
- in close proximity to shopping areas, cultural facilities such as libraries or museums, schools, and employment centers.

Community parks should vary between 5-20 acres. Where feasible night lighting should be provided to reduce vandalism and to extend the use of the facility.

- 2.4 In the lake front area, during the subdivision review process or when using cluster development policy (policy 1.6, Land Use section), special consideration should be given to matching recreational needs of a development with lake access.
- 2.5 The County should encourage private interests seeking to establish new commercial recreation opportunities. Such facilities include penny arcades, billiard and pool halls, bowling alleys, dance halls, health and athletic clubs, handball and racquetball courts, skeet clubs and facilities, hunting and fishing clubs, equestrian facilities, and recreational camps.
- 2.6 An integrated bicycle/pedestrian trail system, as described in the Transportation Element, should be developed that provides access to recreational facilities, as well as offering a recreational experience apart from that available at the neighborhood and community parks.
- 2.7 The County should encourage the provision of recreation facilities and activities for special use groups such as physically disabled, mentally handicapped, and senior citizens.
- 2.8 When planning for lands and resources capable of accommodating multiple uses, the County should encourage the provision of appropriate recreational opportunities.
3. **To provide sufficient land for public services that serve the County's needs for educational facilities and to insure their accessibility to the community.**
 - 3.1 The County should work closely with local school districts to develop solutions to the burden of overcrowded schools and to the financial constraints on constructing new facilities.
 - 3.2 The County should encourage, whenever feasible, the development of joint (shared) school facilities and educational

and service programs between school districts and other public agencies.

- 3.3 School sites, to the extent possible, should not be located near employment centers, industrial complexes, and commercial areas, so as to minimize exposure to hazards created by vehicular traffic and to lessen disturbance from noise, fumes, etc.
 - 3.4 Where feasible, elementary schools should be centrally located within the community.
 - 3.5 Junior high and high schools should be located along major and minor collectors with good pedestrian and transit access. Average time-distance standards for junior high schools should be 10 miles or 30 minutes and for senior high schools 30 to 45 minutes. In Lake County, junior high schools typically accommodate 250-450 students and senior high schools 300-700 students. The state guidelines should be utilized for determining appropriate school sites.
 - 3.6 Public water and sewer services to school sites are desirable. If these services are not available, the feasibility of on-site systems must be established.
 - 3.7 The potential need for future redistricting of schools shall be considered including appropriate distances between school sites.
- 4. To provide for utility facilities that meet the needs of the public that are of high ecological and aesthetic quality.**
- 4.1 Support the continued maintenance of the present high level of utility services to the public and to support the improvement to the utilities as needed.
 - 4.2 To work with private and public utilities in planning for the necessary and appropriate expansion of utilities, service, and hazardous waste disposal.

TABLE IV-26

PUBLIC SERVICES IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/ TIMING
<u>Public Services</u>			
I. Water, Sanitation			
1.1	Coordinated activities between Regional Water Quality Control Board, Special Dists., Health Dept., public & private water dist., Planning Dept., Planning Commission	Self explanatory	3 years
1.2	Building Dept., Planning Dept., Planning Commission, Flood Control.	Develop an informational pamphlet outlining techniques for water conservation to educate the public. Amend the Zoning Ordinance pertaining to landscaping requirements to promote the use of low maintenance vegetation for development projects.	2 years
1.3	Health Department	Enforce Health & Safety Regulations.	Immediately
1.4	Health Department	Develop informational pamphlet explaining proper care and maintenance for septic systems.	Immediately
1.5	Special Dists., Health Dept., Planning Commission	Conduct a study on wastewater systems to determine the costs and benefits. Utilize study as a guideline for making decisions on expansion of sewage systems and for promoting the use of preferred systems in development projects. Include provisions in appropriate Land Capacity/Capability implementation ordinances.	18 months

TABLE IV-26 (Continued)

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/ TIMING
I. Water Sanitation (Cont.)			
1.6	Planning Dept., Planning Commission, Public Works Dept.	Conduct a study to determine existing and projected waste disposal needs. Determine methods of disposable land characteristics suited for disposable sites, and anticipated locations. Utilize study to provide for appropriate waste disposal sites and for developing regulations pertaining to wastewater disposal. Update the county's solid waste plan.	2 years
1.7	Self-explanatory		
1.8	Private & public water companies, Special Dists., Health Dept., Planning Dept., Planning Commission	Implemented by policy I.1, Land Capacity Ordinance(s).	Upon completion of Master Water Plan.
1.9	Private & public water companies. Special Dists., Health Dept., Planning Dept., Planning Commission, Board of Supervisors	Implemented by policies I.3, I.4, I.5 and Land Capacity Ordinance(s).	18 months
2. Parks & Recreation			
2.1, 2.2	Parks & Recreation, Planning Commission, Planning Dept.	Continue to enforce Park Fee Assessment for subdivisions. Conduct a study to determine most appropriate location for new facilities to serve public.	Continuously

TABLE IV-26 (Continued)

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/ TIMING
2. Parks & Recreation (Cont.)			
2.3	Parks & Recreation, Planning Dept.	Continue to enforce Park Fee Assessment for subdivisions. Conduct a study to determine most appropriate location for new facilities to serve public.	Continuously
2.4	Planning Dept., Plan- ning Commission	Self explanatory.	Immediately
2.5	Planning Dept., Planning Commission	Amend Zoning Ordinance to conditionally permit resort/recreational in Residential & Commercial land use categories. Provide proper zoning in areas which would be compatible with commercial recreation opportunities.	18 months
2.6	Public Works Dept., Parks & Recreation	Continue to develop the bicycle/pedestrian circulation system. Expand where feasible to include additional recreational facilities.	Continuously
2.7	Parks & Recreation, Planning Commission, Planning Dept.	Incorporate appropriate facilities to serve special groups into existing and proposed recreational areas. Examine new development projects with respect to recreational facilities.	Continuously
2.8	Planning Commission, Planning Dept., Parks & Recreation	Continue to maintain Park Assessment for subdivision developments. Incorporate Park Assessment into PD/Cluster Development process.	Continuously

TABLE IV-26 (Continued)

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/ TIMING
3. Schools			
3.1	School Districts, Board of Supervisors, Planning Commission, Planning Dept.	Maintain working relationship with school districts. Exchange of data would facilitate joint use of information.	Continuously
3.2	School Districts, Board of Supervisors, Planning Commission, Planning Dept., various public agencies.	Provide proper zoning which would allow for joint use of facilities by school districts and public agencies.	Continuously
3.3	Planning Commission, Planning Dept., School Districts	Examine surrounding land uses when considering initial placement of school facilities to insure that students are not impacted by adjacent uses (CEQA).	Continuously
3.4, 3.5	Planning Commission, Planning Dept., School Districts	Examine proposed school sites in relation to circulation routes and accessibility to users (CEQA).	Continuously
3.6	Planning Commission, Planning Dept., School Districts	Establish sewer and water serviceability in reviewing proposed school facilities (CEQA).	Continuously
3.7	Planning Commission, Planning Dept., School Districts	Examine population distribution, circulation routes and community needs to determine if redistricting is necessary.	Continuously

TABLE IV-26 (Continued)

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/ TIMING
4. Public Utilities			
4.1, 4.2	Building Department, Planning Dept., Public Works Dept. Planning Commission	Continue to work with public utility companies in the review of new developments including SFD, subdivision, road and commercial projects. Conduct a transmission corridor study to determine overall plan for location of transmission lines.	4.1 Continuously 4.2 18 months

PUBLIC HEALTH AND SAFETY

The public health and safety provisions contained in this section relate primarily to the protection of life, health, and property from man-created health hazards. Areas of discussion include noise, crime prevention, emergency services and health care services. Policies are developed to respond to each potential hazard. However, it is unrealistic to think in terms of a completely hazard free environment. Consequently, the policies contained herein implicitly take into account the cost versus the benefits of hazard prevention.

Noise

With a few exceptions, the overall noise environment in Lake County may be described as quiet. Much of the County is sparsely inhabited or in agricultural use. It is an area where the lack of noise is a natural resource, attracting tourists, religious retreats, retirement communities and others seeking refuge from the pace of more heavily developed regions.

Background noise levels in portions of Lake County are as low as can be found in any outdoor setting. Daytime levels of between 20 and 30 dBA in the hills are common.* The general lack of aircraft overflights is especially helpful in this regard.

Such a quiet environment makes Lake County both very desirable as a place to live and highly susceptible to noise intrusion. Existing community dwellers who sought out the serene atmosphere of Lake County are particularly sensitive to its alteration. Opposition to noisy developments has been both local and widespread.

Noise Sources

Major sources of noise in Lake County, while few in number have the potential to create considerable adverse impacts due to the existing low ambient noise levels. People create noise, and as people come to Lake County for tourism, recreation, and industrial development, noise levels tend to rise.

*The most common unit of measurement of noise levels is the decibel. Based on a logarithmic scale, the decibel measures the intensity of sound. The threshold of human hearing corresponds roughly to 0 dB, and the threshold of pain is about 140 dB. The "A-weighted" sound level is an adjustment to the dB measurements to account for the fact that human hearing is less sensitive at low frequencies and high frequencies. This weighting is expressed dBA. Importantly, because decibels are measured on a logarithmic scale, the perceived loudness of a sound does not increase proportionally with the decibels. Rather, a ten dB increase in A-level is subjectively heard as a doubling in loudness.

Based on the inquiries and discussions with the County Planning Department and field measurements conducted as part of this study and others, the Lake County noise sources and sensitive areas have been identified. Major sources include (not in order of importance): traffic, geothermal development, power boats, off-road vehicles, barking dogs, agricultural pest control devices, aircraft, gravel crushers, rock quarries, and power tools.

There are also stock car races which occur during the summer months at the County Fair Grounds. These grounds are wholly contained within the City of Lakeport, and therefore consideration of stock car noise is included in the Noise Element of the General Plan of the City of Lakeport.

There are no rail lines in Lake County. The County is served only by Greyhound Bus Service. With the possible exception of geothermal development activities, gravel crushers, and rock quarries, there are no industrial facilities which are considered major sources of environmental noise.

Road Traffic. Automobile and truck traffic constitutes the most widespread noise source in Lake County. Summer traffic volumes are considerably heavier than the winter traffic due to the influx of tourists. Noise measurements were taken at a large number of roadside locations throughout the County. (Sound level readings were taken in August 1976. Approximately fifty different measurement locations were used during the course of the measurements.) Traffic generated noise, especially near highways, is dominated by heavy truck noise. Most of the noise from these vehicles comes from engine casing radiation and from the exhaust stack. Relatively little is due to road-tire interaction.

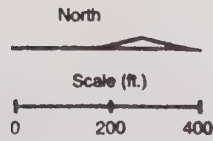
Ldn contours are shown for junctions of the major County roadways (see Figures IV-17A through IV-17I). Between road junctions, the contours will follow the individual roadways, without appreciable variation. All contours shown in the figures are based on peak month traffic volumes.*

*Ldn is a noise descriptor that represents the 24-hour energy average of the A-weighted sound pressure level. To account for increased sensitivity to nighttime noises, the sound pressure levels between 10 pm and 7 am are weighted.

Using Caltrans data for average peak month and average annual daily traffic volumes, a 2 dBA correction factor was calculated for converting peak month to average annual noise levels. This means that the noise levels adjacent to roadways in Lake County are two dBA higher on a peak month average basis rather than an annual average. Contours shown in Figures IV-17A through IV-17I would lie closer to the highways by a factor of approximately .73 if shown on an annual average basis.

All contours have been shown without consideration of the graphical shielding. Thus, in general, noise levels will probably be less than the contours indicate. Shielding has been taken into account in a general way by using 4.5 dBA per distance doubling falloff rate which is typical of "partial line sources." A partial line source is one where only a relatively small portion of a roadway is visible to the observer.

Figure IV-17A
 Lake County Noise Contours
 Route 29 Near Lakeport



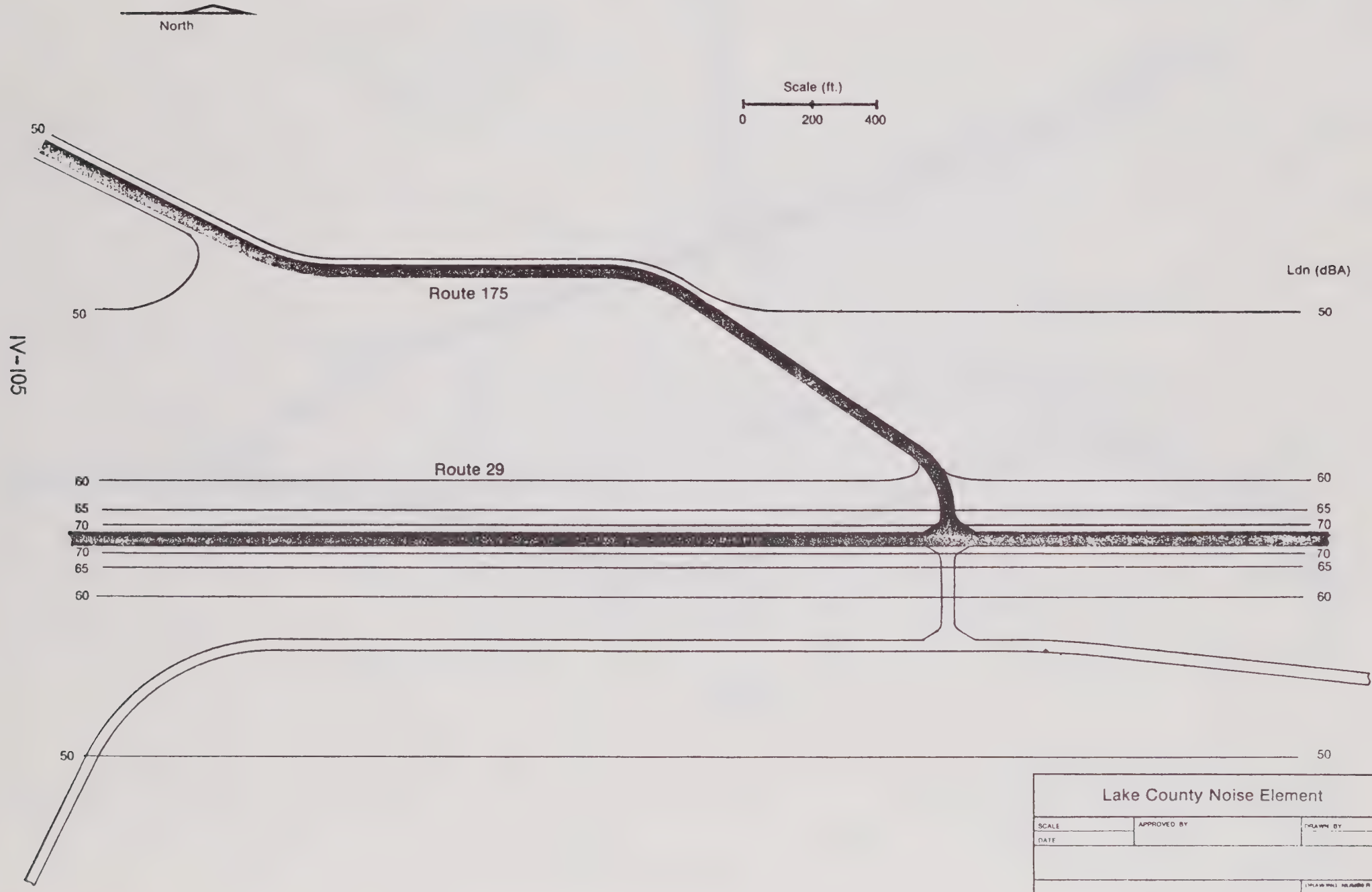
IV-104



Lake County Noise Element

SCALE	APPROVED BY	DESIGNED
DATE		

Figure IV-17 B
 1976 Ldn Noise Contours
 Junction Route 29 and Route 175 West
 Lake County, California



Lake County Noise Element		
SCALE	APPROVED BY	DRAWN BY
DATE		
		FILED IN FILE NO. 105-105-10

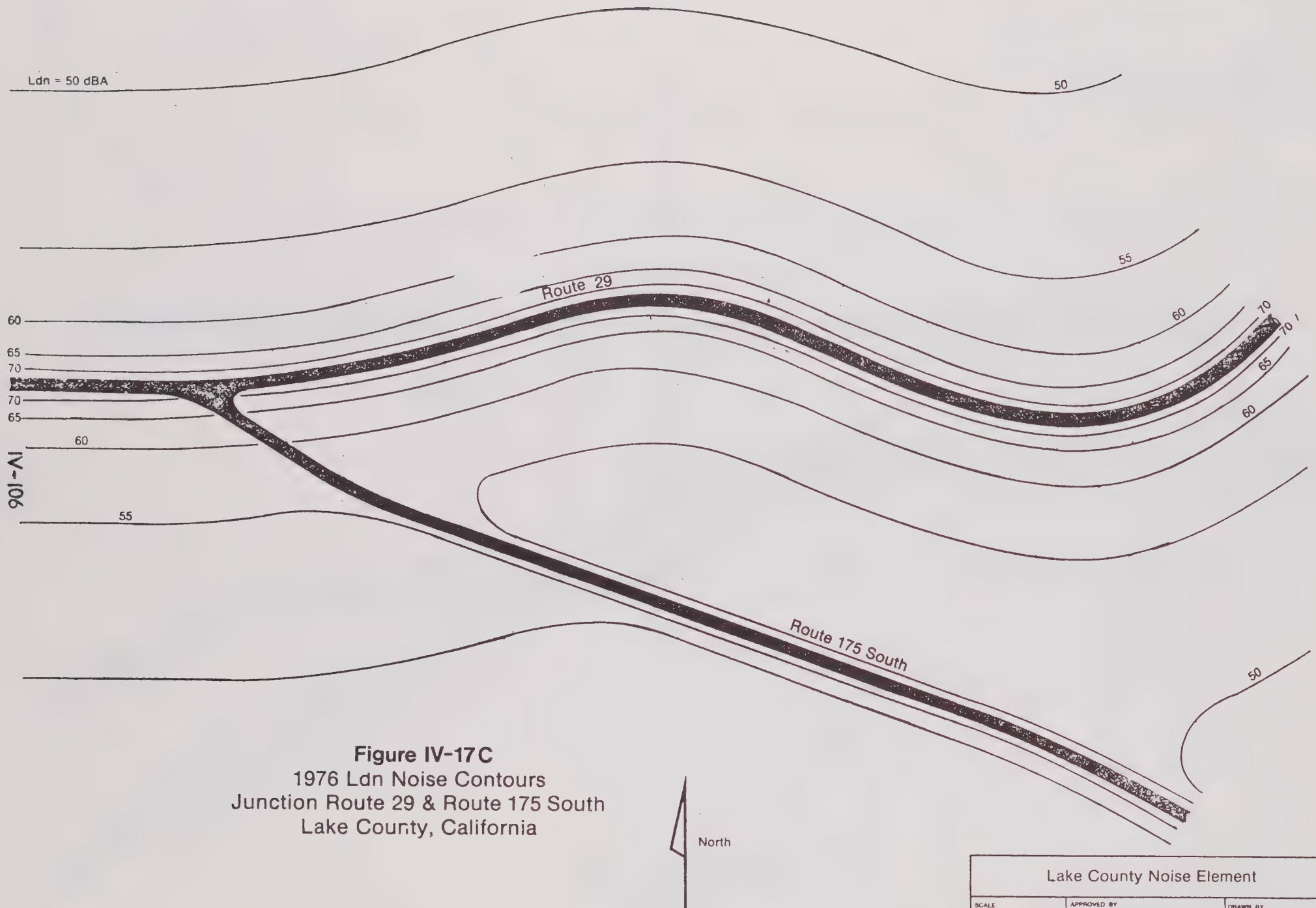


Figure IV-17C
 1976 Ldn Noise Contours
 Junction Route 29 & Route 175 South
 Lake County, California

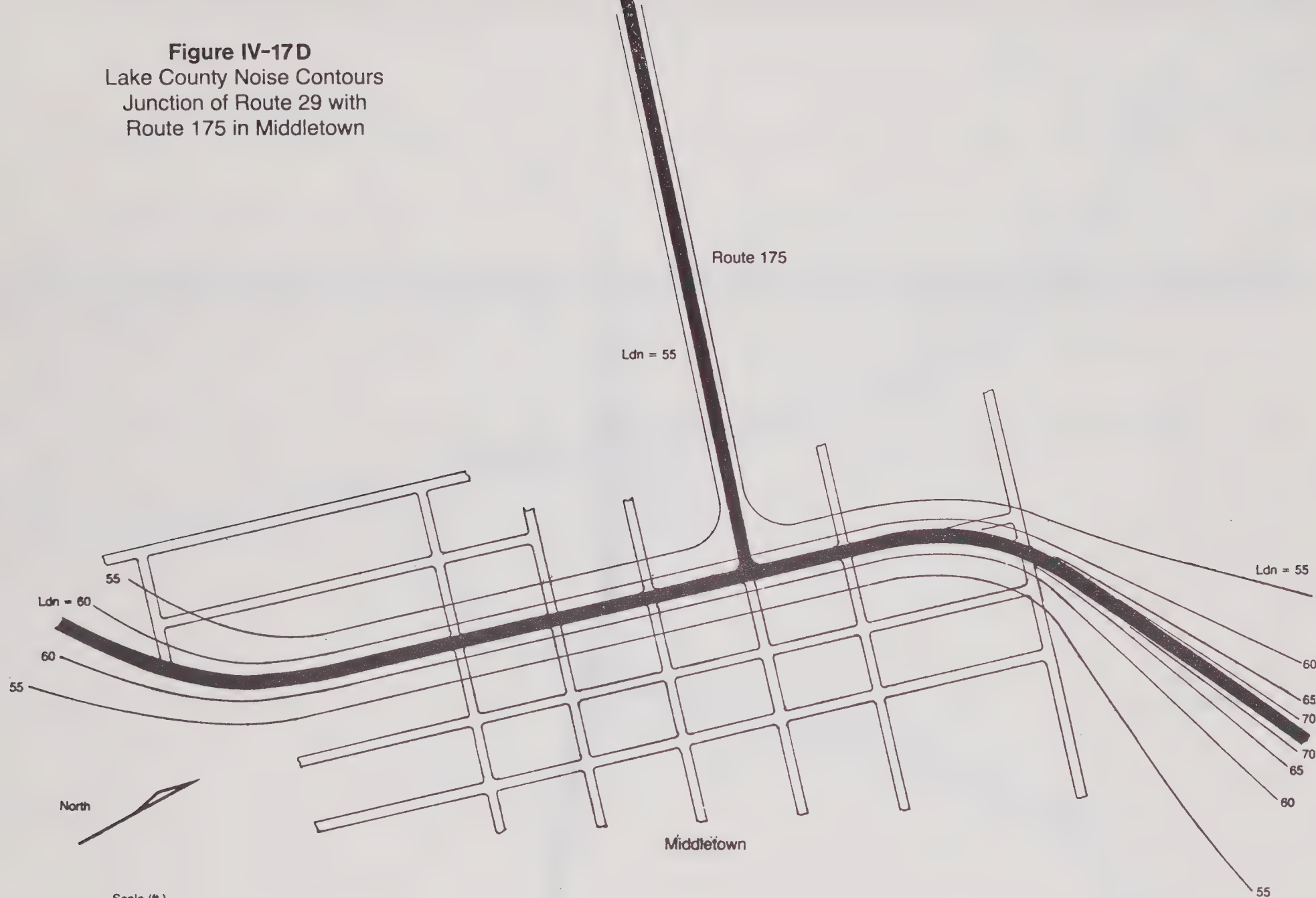
Scale (ft.)
 0 200 400



Lake County Noise Element

SCALE	APPROVED BY	DRAWN BY
DATE		
		DRAWING 1 OF 1

Figure IV-17D
 Lake County Noise Contours
 Junction of Route 29 with
 Route 175 in Middletown

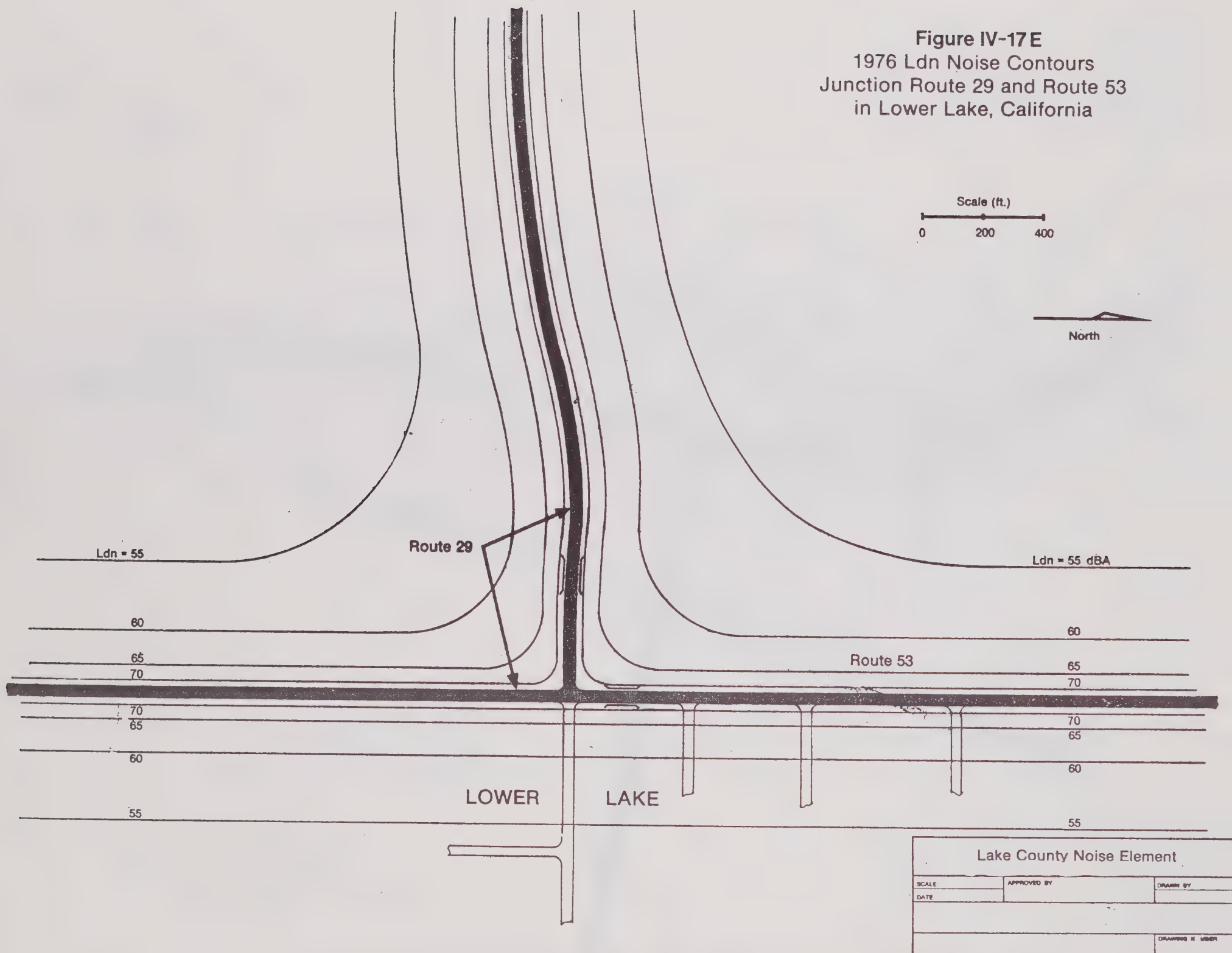


Lake County Noise Element

SCALE	APPROVED BY	DRAWN BY
DATE		
		DRAWING NUMBER

IV-107

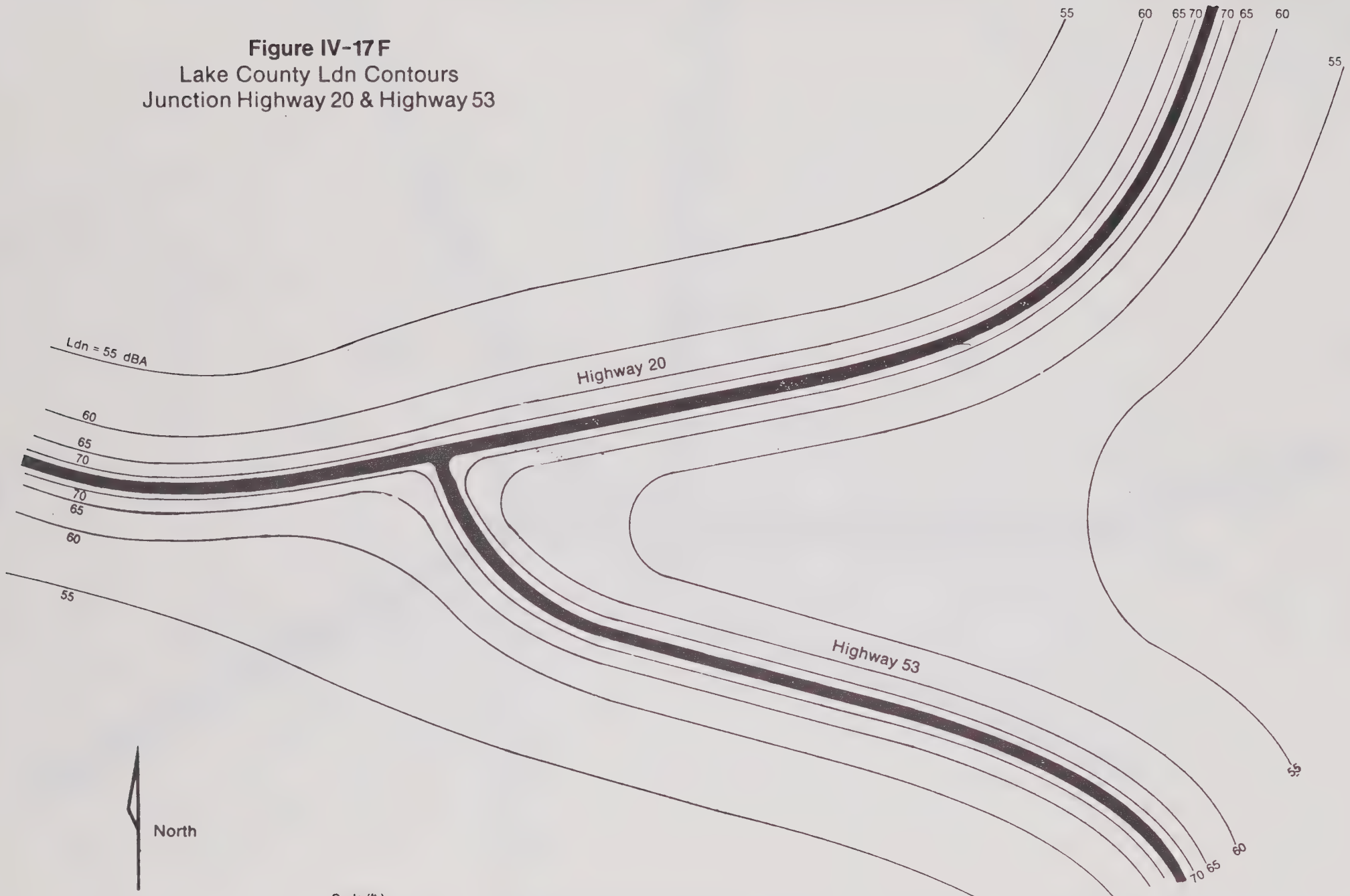
Figure IV-17E
 1976 Ldn Noise Contours
 Junction Route 29 and Route 53
 in Lower Lake, California



Lake County Noise Element		
SCALE	APPROVED BY	DRAWN BY
DATE		
		DRAWING # 15801

Figure IV-17 F
 Lake County Ldn Contours
 Junction Highway 20 & Highway 53

IV-109

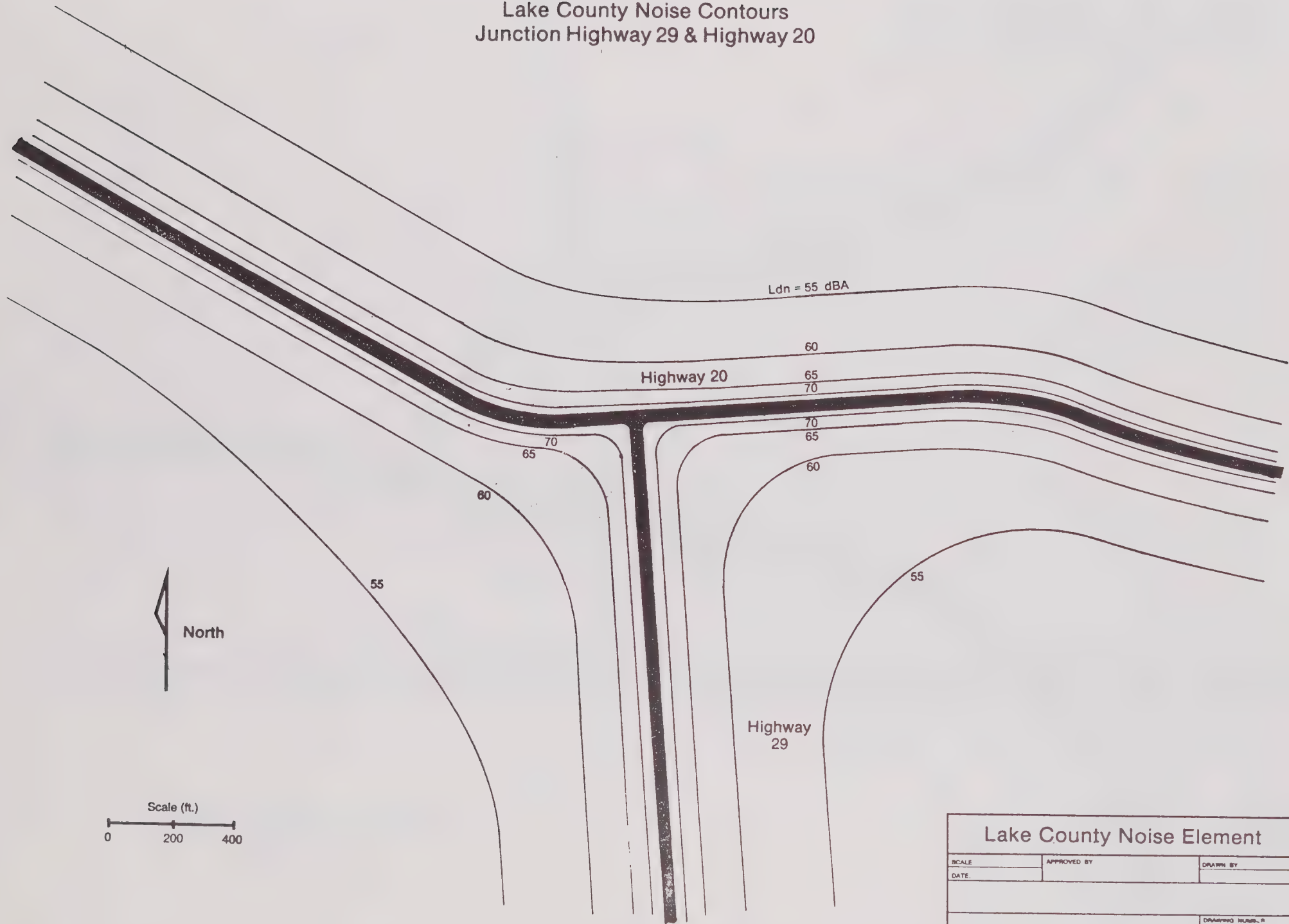


Lake County Noise Element		
SCALE _____	APPROVED BY _____	DRAWN BY _____
DATE _____		
DRAWING NUMBER _____		

Figure IV-17 G
Lake County Noise Contours
Junction Highway 29 & Highway 20

IV-110

Scale (ft.)
 0 200 400



Lake County Noise Element		
SCALE	APPROVED BY	DRAWN BY
DATE		
		DRAWING NUMBER

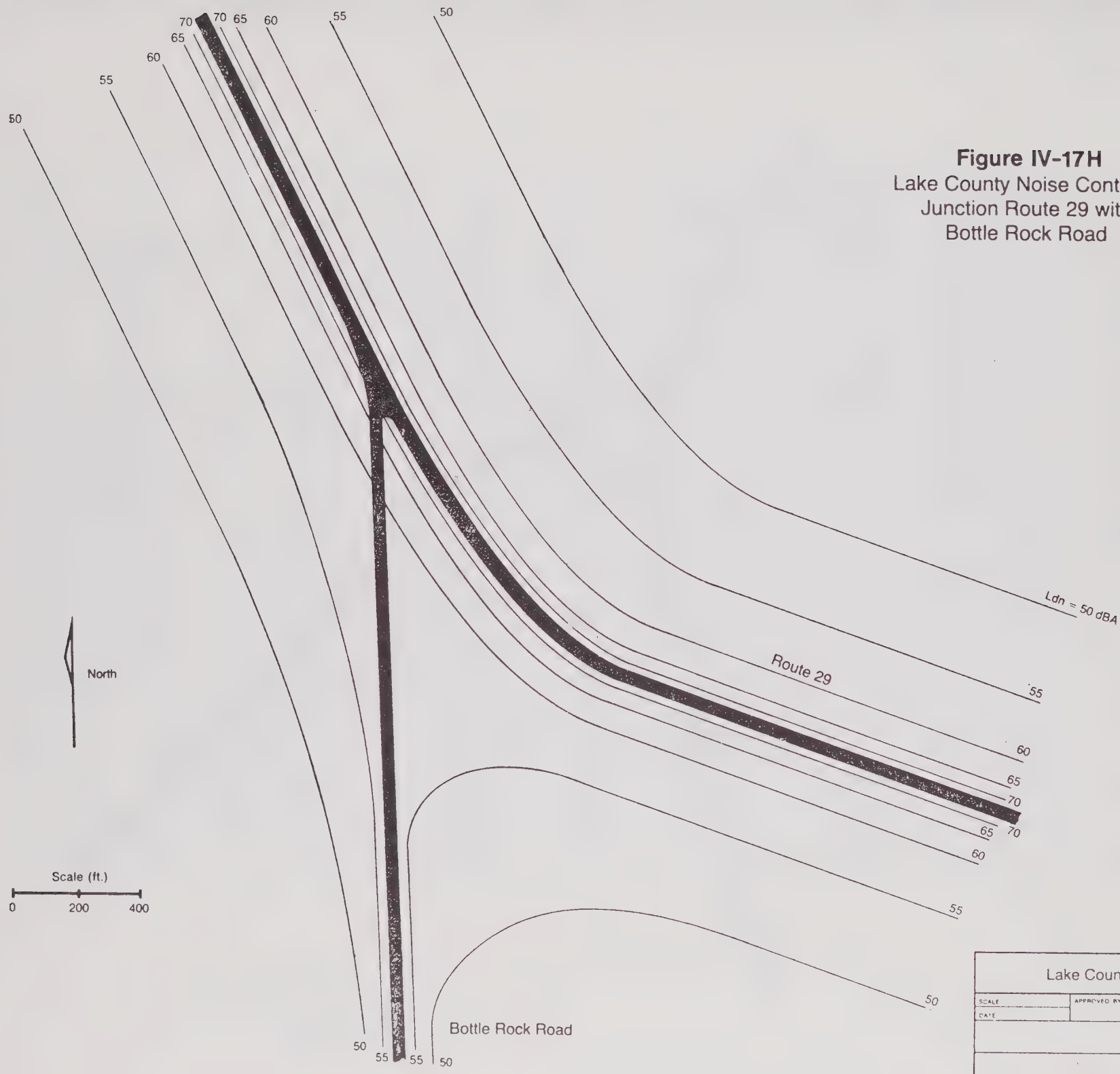
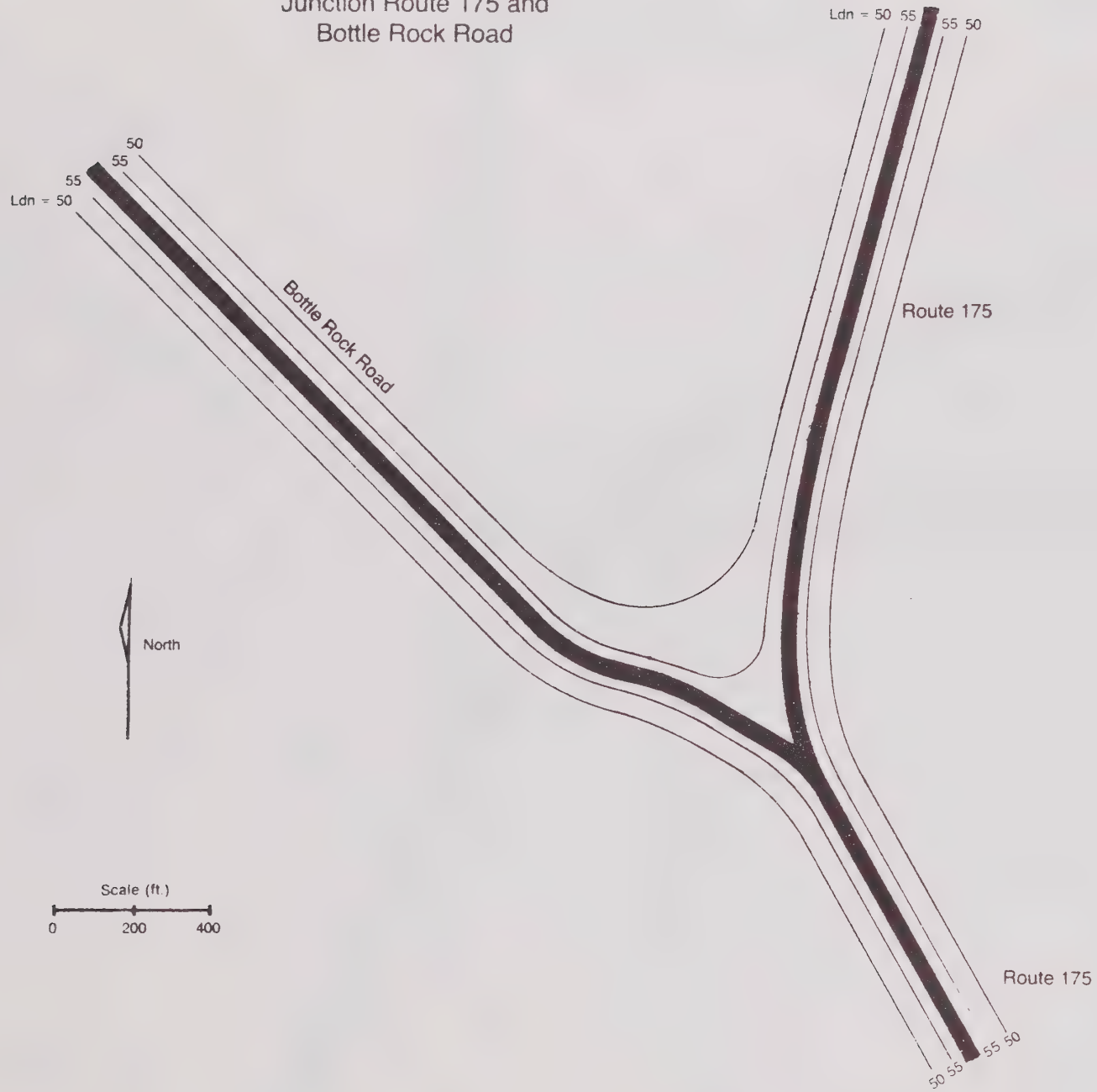


Figure IV-17H
 Lake County Noise Contours
 Junction Route 29 with
 Bottle Rock Road

IV-17H

Lake County Noise Element		
SCALE	APPROVED BY	DRAWN BY
DATE		
		DRAWN BY

Figure IV-17 I
 Lake County Noise Contours
 Junction Route 175 and
 Bottle Rock Road



IV-112

Lake County Noise Element		
SCALE	APPROVED BY	DRAWN BY
DATE		
		DRAWN BY

The primary variation in average noise levels in Lake County is seasonal. During the summer months, both tourists and increased agricultural activities raise the level of highway traffic generated noise.

Although traffic generated noise is widespread, it is not considered a serious problem. Noise near the major highways in Lake County, State Routes 20 , 175, 53 and 29, are dominated by heavy truck traffic. Only a five mile stretch of Route 29, west of Lakeport, is a freeway. Setbacks to residential areas are in general sufficient to avoid land use incompatibility. There were no complaints on file on traffic generated noise.

Geothermal. The expansion of geothermal development into southeastern Lake County has significantly affected the noise environment of the development area. Residents of Anderson Springs, Whispering Pines, and the Cobb Valley area have registered complaints about geothermal induced noise.

Currently, the major sources of geothermal related noise result from construction activities, well drilling, testing and venting, power plant operation, and truck traffic. (Additional information pertaining to geothermal noise impacts is located in the Geothermal Resource Overview in the Appendix).

Noise related to power plant operation will occur nearly continuously for the estimated 30 year life of the plant. The major noise sources associated with plant operations are cooling tower(s), turbine generators, steam jet ejectors, and pumping gear.

The cooling tower, because of its large size and wideband frequencies spectrum, will be the most significant source of noise at distances greater than 61 m (200 feet) from the plant perimeter. The steam jet ejector is mounted on the outside of the turbine/generator building and would not be an important source of noise at any distance. It has a small radiating surface area and emits high frequency noise which would attenuate rapidly. Noise related to the pumps and turbine/generator unit decreases much more rapidly with distance than that from a cooling tower, due to their small radiating surface and higher frequency content. Total plant noise is estimated to be approximately 60 dBA at 500 feet based upon measurements of power plant Unit II (106 MW) in the Geysers area.

Table IV-27 provides calculated noise levels for various geothermal activities.

Power Boats. As a recreational center, Clear Lake offers pleasure boating as one of its most popular attractions. Boating and water skiing are among the most actively enjoyed features of the lake.

Boats of all types use the lake, however, the noisiest of the crafts are the sleek inboard powered ski boats with unmuffled (dry stack) exhausts used in powerboat regattas. While small outboard powered vessel noise levels range from 65 to 95 dBA at fifty feet, the larger inboards produce levels as high as 110 dBA at the same distance.

TABLE IV-27
CALCULATED NOISE LEVELS AT VARIOUS DISTANCES FROM GEOTHERMAL DEVELOPMENT¹

<u>Activity</u>	<u>Noise Level (dBA)</u>						
	<u>50 ft.</u>	<u>328 ft.</u>	<u>820 ft.</u>	<u>1,640 ft.</u>	<u>0.6 mi.</u>	<u>0.9 mi.</u>	<u>1.3 mi.</u>
Construction	95	82.5	69	59	50.5	45.5	42.5
Mud Drilling	85	72.5	59	49	40.5	35.5	32.5
Air Drilling with Cyclonic Muffler	88	75.5	62	52	43.5	38.5	35.5
Air Drilling in Steam with Cyclonic Muffler	90	77.5	64	54	45.5	40.5	37.5
Well Cleanout							
Cyclonic Muffler	90	77.5	64	65	45.5	40.5	37.5
Without Muffler	125	112.5	99	89	80.5	75.5	72.5
Production Testing							
Cyclonic Muffler	90	77.5	64	65	45.5	40.5	37.5
Commercial Test Muffler	100	87.5	74	64	55.5	50.5	47.5
Standby Well Venting	75	62.5	49	39	30.5	25.5	22.5
TOTAL UNIT NOISE	80	60	54	44	36	31	27.5

¹Noise levels are based upon a Simplified Geysers Model attenuation curve.

Source: Westec Services, Inc., DEIR California State Lands Commission Proposed Geysers Geothermal Resource Leasing Program, February 1981, p. 211.

Approximately six regattas per year are held on Clear Lake on weekends during the summer months. Races are of varying types. Some are around buoys stationed approximately one-half mile or so apart, while others send boats over much of the lake. Boat races take place or start at several different locations. Power boat races are spectator events, and as such include noise sources in addition to the boats. Public address systems and helicopter rides are all part of the show at a Labor Day weekend regatta.

Noise due to power boats is loud enough to cause occasional complaints in Lake County. Noise generated by regattas, although localized in time and place, is potentially annoying. Both regattas and normal boating activities are enjoyed by many, both participants and spectators, and the County must weigh the concerns of the annoyed with those of the participants.

Aircraft. Lake County has two airports with a significant number of aircraft movements. Lampson Field is the busier of the two, with both general aircraft and commercial commuter service. Pearce Field has only general aviation service. There are no military or regular helicopter operations, however, helicopters are occasionally used to give rides at power boat races. According to Federal Aviation Regulations, the Minimum Enroute Altitude (MEA) for airways crossing Lake County is five thousand feet above mean sea level. Generally, airline traffic overflights are at an altitude in excess of 15,000 feet.

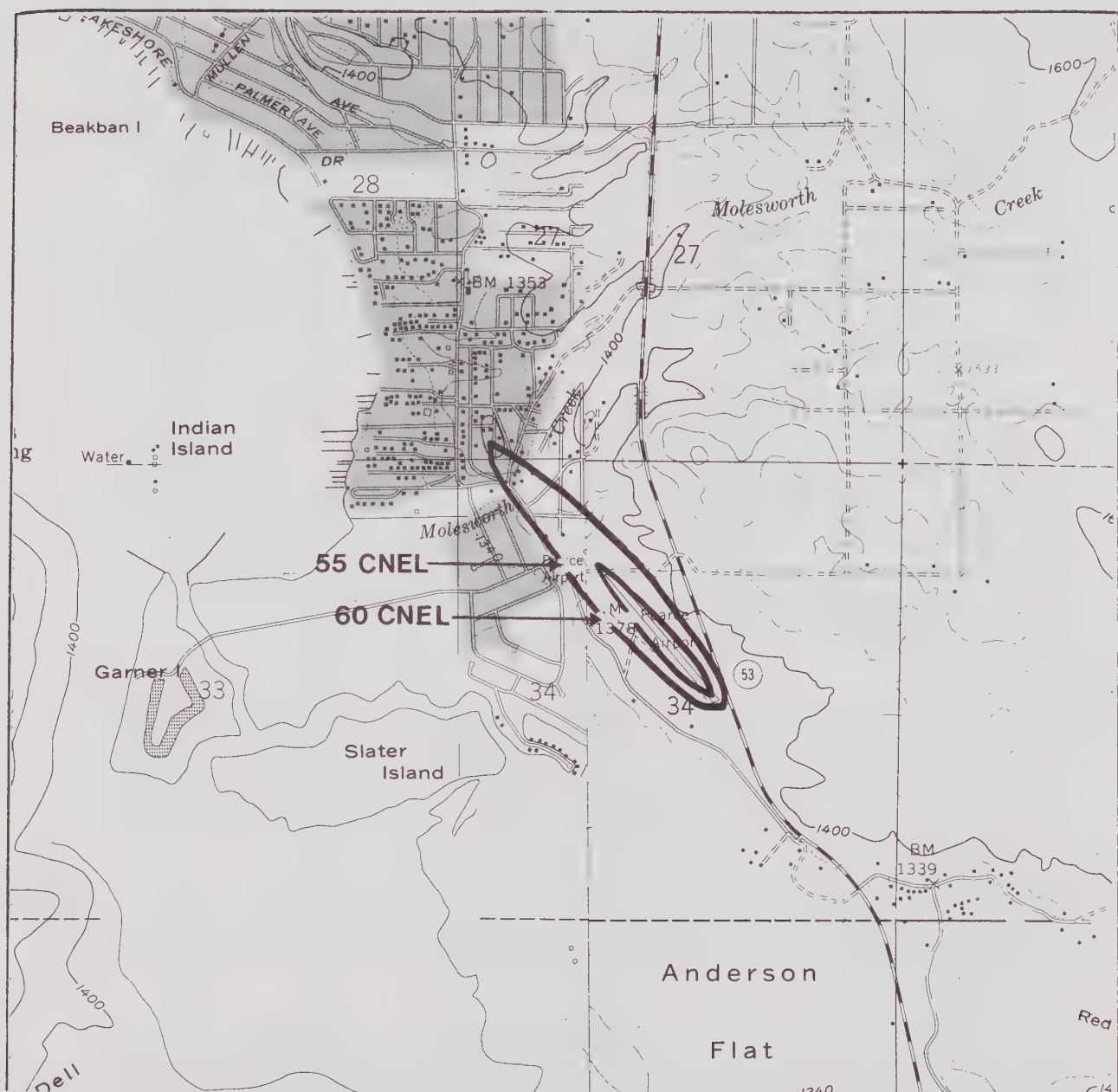
The recently prepared Airport Master Plan includes existing and projected noise contours for both Lampson and Pearce Airfields. The contours are shown in Figures IV-18 and IV-19, respectively. Land uses surrounding Lampson Field are agricultural, so aircraft generated noise levels are not considered a problem. However, recent residential development surrounding Pearce Airport has brought many more individuals into contact with airport noise.

Off-Road Vehicles. Off-road vehicles include dirt bikes, dune buggies, snow mobiles and other vehicles which are principally intended for use for recreational purposes and in uninhabited areas.

As with power boats, the responsibility for setting standards for motor vehicles rests with state and federal agencies. Enforcement of these standards rests with local agencies, or in the case of the highway patrol, with the state.

Based on interviews with law enforcement personnel, as well as letters sent to local newspapers, the incidents of disturbance by improperly muffled motor vehicles is fairly high. Although good statistical data are not available, the problem seems to be more severe in Lakeport.

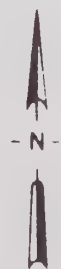
Power Tools. In any urban area, hand power tools, including lawnmowers, chainsaws and other motorized tools, can create a noise nuisance. These devices are primarily powered by two-cycle engines with small mufflers. The Environmental Protection Agency has set noise standards for the manufacturers of such devices. Although mowers and chainsaws are in widespread use in Lake County and elsewhere, there is no record of noise complaints about them.



Source: Wadell Engineering Corporation

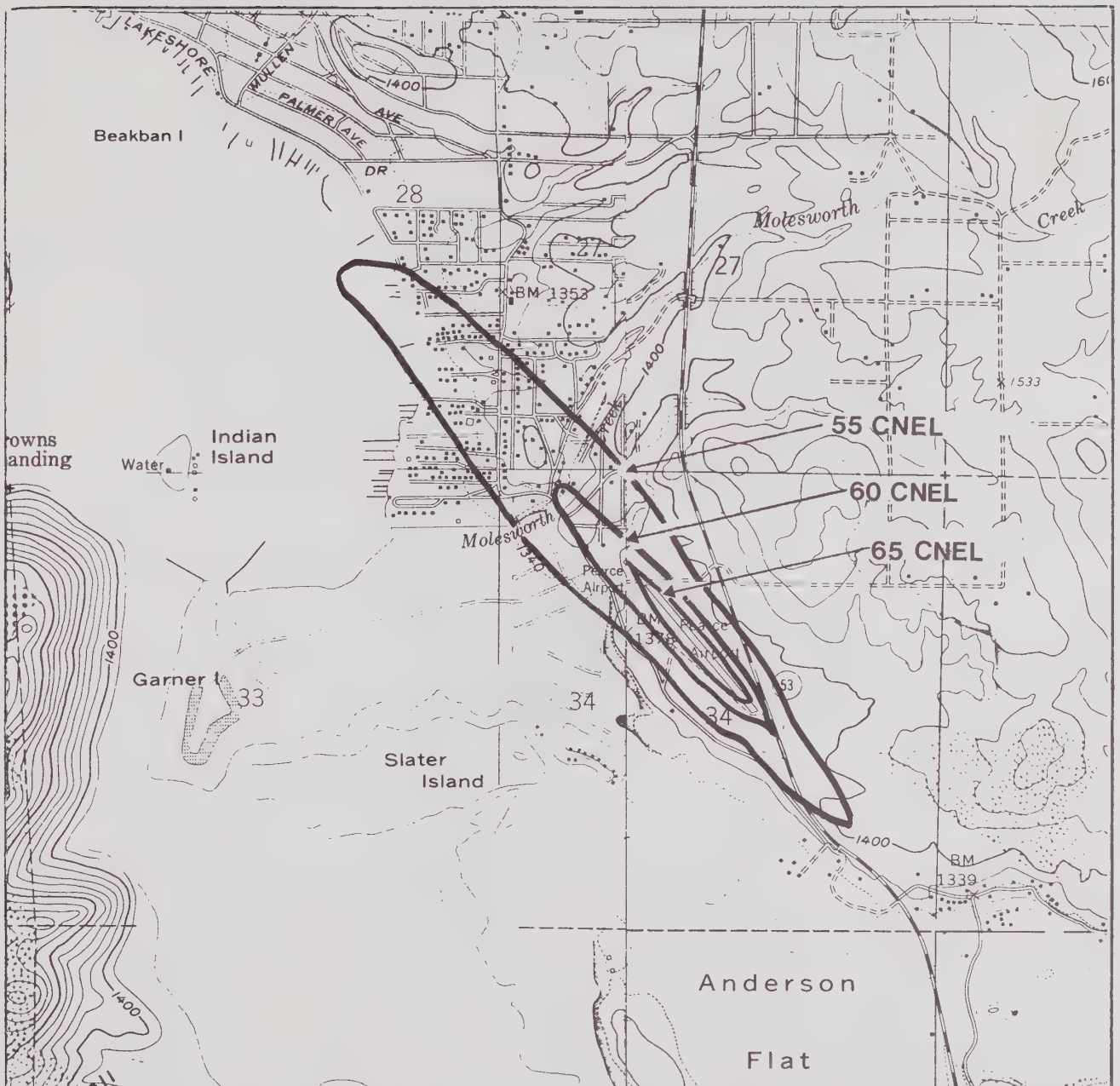
**Figure IV-18A 1980 CNEL CONTOURS
PEARCE FIELD AIRPORT**

———— CNEL CONTOURS
- - - - - PROPERTY LINE



SCALE IN FEET





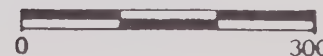
Source: Wadell Engineering Corporation

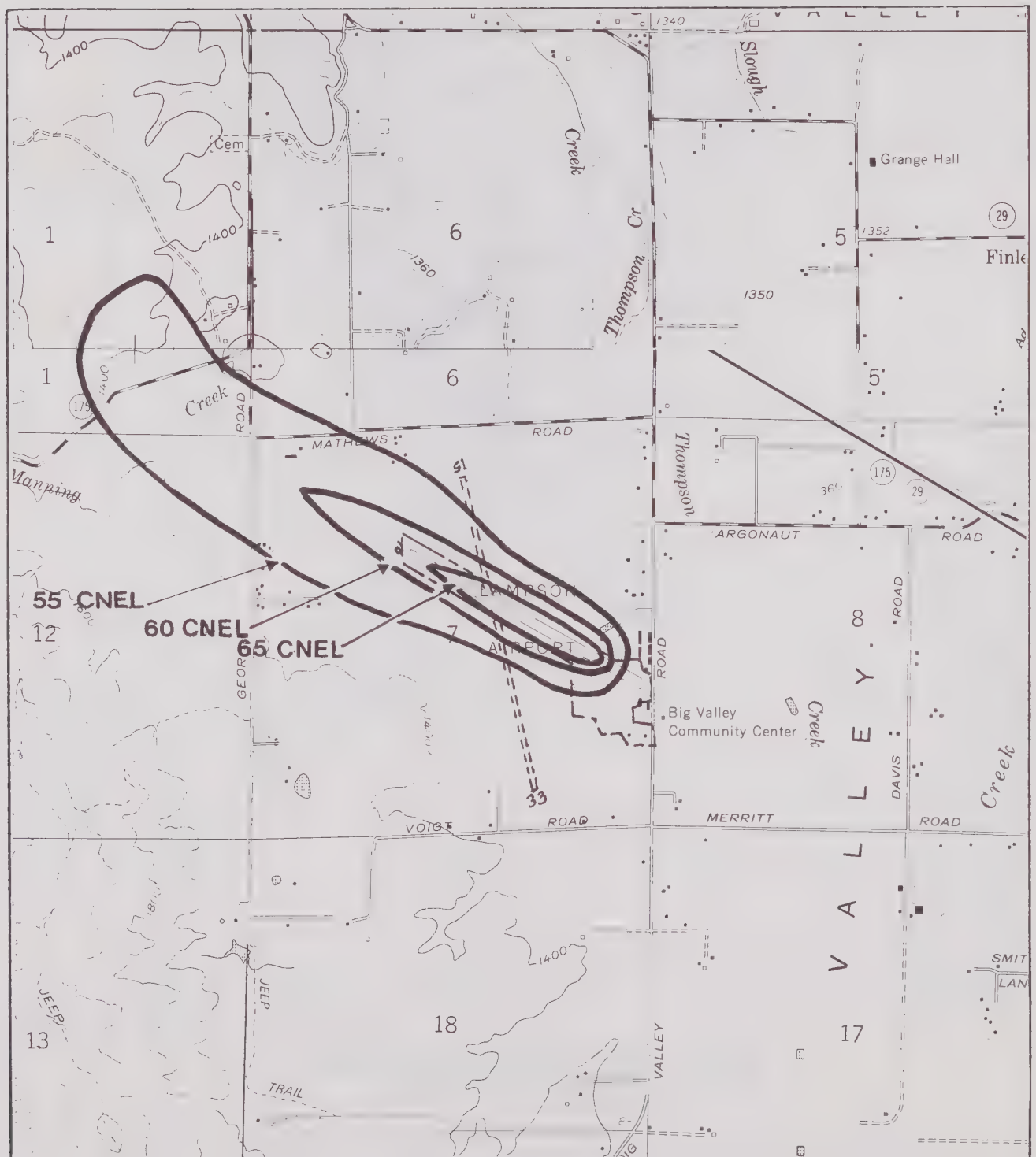
**Figure IV-18B 2000 CNEL CONTOURS
PEARCE FIELD AIRPORT**

———— CNEL CONTOURS
- - - - - PROPERTY LINE



SCALE IN FEET





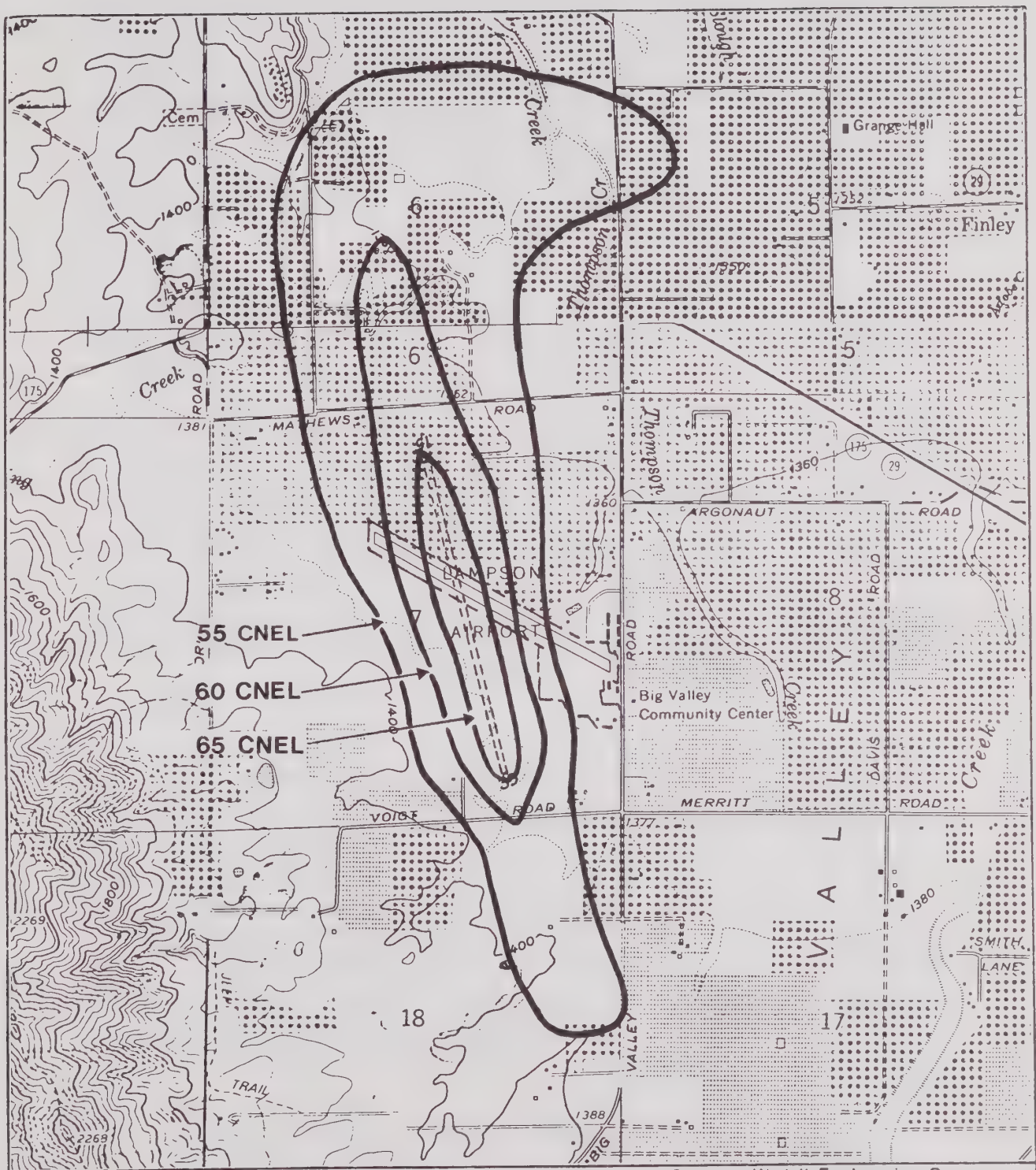
Source: Wadell Engineering Corporation

**Figure IV-19A 1980 CNEL CONTOURS
LAMPSON FIELD AIRPORT**

———— CNEL CONTOURS
- - - - - PROPERTY LINE

SCALE IN FEET
0 2000





**Figure IV-19B 2000 CNEL CONTOURS
LAMPSON FIELD AIRPORT**

 CNEL CONTOURS
 PROPERTY LINE

SCALE IN FEET

 0 2000



Agricultural Hazard Control. Pest control devices often use noise to drive away birds from agricultural areas. A popping sound much like that of a shotgun is emitted by these devices, at irregular intervals. In order to be effective, the noise must be fairly loud. Noise generated by the report of a gun or similar device has such a short duration that it cannot be measured in a meaningful way with a normal sound level meter. The response of a typical sound level meter is too slow to be accurate. Instead, an impulse sound level meter must be used. It should be emphasized that peak noise levels measured on an impulse level meter is not the same as normal A-weighted noise levels.

Typical peak impulse sound levels from a pest control device can approximate 115 dBA at fifty feet. Typical durations are approximately 200 microseconds. The time between reports is randomized so that birds do not become accustomed to a pattern.

Frost is also a local agricultural problem. Frost prevention devices employ engine-driven propellers to move air in a frost threatened field. Noise due to these sources varies with the type of engine and the degree of muffling. Air cooled engines are commonly used, and for a worst case example, minimally muffled engine noise dominates propeller noise. Although potentially annoying in agricultural areas, these devices are considered to be important to the economy of the region.

Barking Dogs. In every community, barking dogs are cause for occasional complaints. No specific source data are included, since the levels and spectra of dog noise vary considerably.

Sensitive Areas

With the cooperation of the Planning Department of Lake County, noise sensitive areas were identified and noise levels measured at each one. The sensitive areas included all schools, hospitals and rest homes in the County which could be identified on County maps or in the local telephone directories. Residential areas are also considered noise sensitive. Due to the great number of such areas in the County, measurement of levels was done on the basis of known sources rather than at every residence.

Nonresidential sensitive areas are shown in Table IV-28 below. The measured daytime Leq level is also shown. A calculated Ldn level, based on an assumed time distribution for the predominant source of noise at each location, is also shown.

Crime Prevention

Law enforcement in Lake County is the responsibility of the County Sheriff's Department and the Lakeport Police Department. (The City of Clearlake is also developing their own police department.) The scattering of small residential areas throughout the County makes law enforcement difficult, as the County Sheriff's Department cannot effectively patrol all areas of the County given its staff and resources. Crime in the County is also affected by the high number of visitors and tourists who come to the

TABLE IV-28

NOISE LEVELS AT NONRESIDENTIAL SENSITIVE
LOCATIONS IN LAKE COUNTY

<u>Sensitive Location</u>	<u>Measured Leq (dBA)</u>	<u>Calculated Ldn (dBA)</u>
Hospitals		
Lakeside Community Hospital 5176 Hill Road, Lakeport	51	55
Redbud Community Hospital 18th Avenue & Highway 53, Clearlake	57	60
Rest Homes		
Adobe Creek Residential Care Home 7065 Adobe Creek Road, Lakeport	-*	-
Evergreen Guest Home #2 6784 Crump Avenue, Nice	54	58
Golden Age Guest Home Main Street, Lower Lake	61	64
Lakeport Convalescent Hospital 625 16th, Lakeport	-	-
Highlands Retreat 15190 Konocti View Road, Clearlake	-	-
Phoenix Home 6095 E Highway 20, Lucerne	-	-
Pomeroy Place 16285 B Main, Lower Lake	-	-
Village Retreat Guest Home Armstrong Road, Middletown	54	55
Wilsons Residential Care for the Aged 3546 Lakeshore Boulevard, Nice	50	53
Schools		
Burris Valley School Austin Bl. & Pine, Clearlake	49	50
East Lake School East Highway 20, Clearlake Oaks	57	60

* - No information available.

TABLE IV-28 (Continued)

<u>Sensitive Location</u>	<u>Measured Leq (dBA)</u>	<u>Calculated Ldn (dBA)</u>
Schools (Continued)		
Highlands-Lower Lake Head Start Main Street, Lower Lake	59	62
Kelseyville Elementary 5065 Konocti Road, Kelseyville	49	52
Kelseyville High School 5480 Main Street, Kelseyville	51	54
Kelseyville Primary 3980 Gard, Kelseyville	56	58
Lower Lake High School Lower Lake	53	54
Lower Lake Junior High Lower Lake	49	50
Lucerne School Lakeview Street, Lucerne	50	53
Middletown Unified High & Minnie Canyon School Wardlaw Street, Middletown	61	62
Seventh Day Adventist Church School Davis Avenue, Clearlake	58	59
Oak Hill School Lower Lake	48	50
Upper Lake High School Church Street, Upper Lake	43	44
Upper Lake Grammer School 679 2nd Street, Upper Lake	48	49
Retreats:		
Capital of the Age of Enlightenment for Northern California Highway 175 between Cobb and Loch Lomond	—	—
Dawn Horse Communion Seigler Canyon Road, Seigler Springs	44	40
Lucerne Christian Conference Center Country Club Drive, Lucerne	-	-

Source: Vibron West and Sociotechnical Systems, Inc., 1977.

County between the months of May and September. These summer months represent the peak crime period in the County. During the off season, September through May, many homes and resorts are left unattended, causing an increase in burglaries.

One planning tool which can be used in crime prevention is the physical design and landscaping of buildings and neighborhoods. As future development occurs in the County, it is important that new buildings, subdivisions, and apartment complexes not create an environment that will encourage crime. New residential developments should attempt to inhibit crime by creating a physical environment that can foster a sense of security and reduce the opportunities for crime to occur.

Hazardous Waste Disposal

During the past decade, concerns have been increasingly raised regarding the need to safely dispose of the many hazardous materials commonly used in a modern society. As a consequence, federal, state, and local governments have all assumed responsibilities towards ensuring safe handling and disposal of these materials.

Legislation passed in 1980 gave the California Department of Health Services the authority to restrict many land uses including residential, educational, and health care facilities within 2000 feet of known hazardous waste disposal sites. The state is currently in the process of identifying all known "Hazardous Waste Properties" and surrounding "Border Zone Properties". The following list indicates potential Hazardous Waste Properties occurring in Lake County.

- Lake County Highlands Landfill
Davis Street, Clearlake Highlands
- IT Corporation
7260 Highway 29, Kelseyville
- R.S. Livermore Disposal Site
Butts Canyon Rd., Middletown
- Geysers Geothermal Power Projects (various on-site geothermal disposal sumps)

Objectives and Policies

The following policy areas are discussed:¹

1. Noise Abatement
2. Noise/Land Use Compatibility Planning

¹Policy section 1 and 2 are only an update of the Lake County Noise Element adopted April 18, 1978.

3. Crime Prevention
4. Emergency Planning
5. Health Care Services
6. Hazardous Wastes

1. To insure that noise levels in noisy areas do not rise above levels compatible with the land uses in those areas.

1.1 The County should control unnecessary, excessive, and annoying noises within the County where not preempted by federal or state control. Noise sources that can be controlled by the County include amplified music, public address systems, radios, mechanical equipment, barking dogs, power tools, etc.

1.2 The County should work closely with Caltrans to reduce levels along the State highways and freeways through the County.

2. To prevent potential noise problems by establishing appropriate guidelines for different land uses.

2.1 The County should consider the compatibility of proposed land uses with the noise environment when preparing or revising community and/or specific plans and when reviewing development proposals. Figure IV-20 should be used by the County as a guide to land use/noise compatibility.

Residential development in areas having noise levels above an Ldn of 65 are discouraged. Transient lodging is considered a mix between a residential and commercial land use. Satisfactory interior noise levels are difficult to achieve where Ldn are above 70 dB. Transient lodging, schools, libraries, churches, hospitals, and nursing homes are discouraged where noise levels exceed an Ldn of 70 dB. These are sensitive land uses where most of the sensitive activities are indoors rather than outdoors.







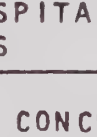
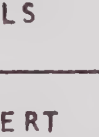




















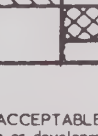



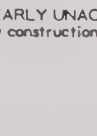
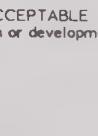
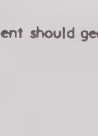
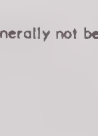





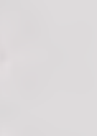









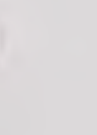



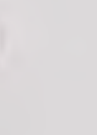

Public parks and dedicated outdoor recreational facilities are discouraged where noise levels exceed an Ldn of 65 dB. Office and commercial structures require satisfactory interior noise levels, and an Ldn of 70 dB is usually the upper limit of acceptable noise levels specified for these uses.

2.2 The County should encourage proper site planning to reduce noise impacts. By taking advantage of the natural shape and contours of the site, it is often possible to arrange buildings and other uses in a manner which will reduce and possibly eliminate noise impact. Planned unit developments are particularly conducive to site planning techniques. The following site techniques should be considered to reduce noise impacts.

- Increase the distance between noise source and receiver.

Figure IV-20

LAKE COUNTY LAND USE/NOISE LEVEL COMPATIBILITY CRITERIA

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE					
	L_{dn} , dB					
	55	60	65	70	75	80
RESIDENTIAL-LOW DENSITY SINGLE FAMILY, DUPLEX MOBILE HOMES						
RESIDENTIAL MULTI. FAMILY						
TRANSIENT LODGING MOTELS, HOTELS						
SCHOOLS, LIBRARIES CHURCHES, HOSPITALS NURSING HOMES						
AUDITORIUMS, CONCERT HALLS, AMPHITHEATERS						
SPORTS ARENAS, OUTDOOR SPECTATOR SPORTS						
PLAYGROUNDS, NEIGHBORHOOD PARKS						
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETERIES						
OFFICE BUILDINGS, BUSINESS COMMERCIAL AND PROFESSIONAL						
INDUSTRIAL, UTILITIES MANUFACTURING, NON- RESIDENTIAL AGRICULTURAL						



NORMALLY ACCEPTABLE
Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.



CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air systems and air conditioning will normally suffice.



NORMALLY UNACCEPTABLE
New construction or development should generally be discouraged. If construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



CLEARLY UNACCEPTABLE
New construction or development should generally not be undertaken.

- Place non-noise sensitive land uses such as parking lots, maintenance facilities, and utility areas between noise source and receiver.
 - Use non-noise sensitive structures such as garages to shield noise-sensitive areas.
 - Orient buildings to shield outdoor spaces from a noise source.
- 2.3 The County should encourage developers to consider architectural layouts as a means of meeting noise reduction requirements.
- 2.4 The County shall establish noise abatement policies for each new road and for those areas of the County where future land uses would be incompatible with the noise environment. These measures could include the erection of walls or berms, restriction of building multistory dwellings within fixed distances of the roads, using open space as a buffer, site planning or architectural treatments, and alternative technologies to muffle geothermal-related noise emission.
3. **To encourage the design of developments that reduces the opportunities for crime to occur and provides members of the community with a sense of security.**
- 3.1 The County shall encourage the use of physical site planning as an effective means of preventing crime. Developers should design open spaces, parking lots, paths, play areas, and other public spaces such that they can be under continuous surveillance by residents or users.
- 3.2 The County shall promote the establishment of neighborhood watch programs aimed at encouraging neighborhoods to form associations to patrol or watch for any suspicious activity.
4. **To coordinate with County and communities to provide an effective plan to respond to and manage emergencies.**
- 4.1 Primary and secondary routes should be designated for evacuation and access by emergency services. Different routes may need to be identified for different natural disasters.
- 4.2 The County should establish and maintain agreements and communication linkages with neighboring communities in order to ensure adequate emergency assistance in time of need.
- 4.3 Public education programs fostering awareness of emergency situations and procedures should be promoted by the County in coordination with other public agencies. Publicity should be disseminated through the media, public schools, Red Cross courses, and programs with community groups.

5. **To provide adequate medical aid facilities to meet the needs of County residents and visitors.**
 - 5.1 The County should encourage the development and staffing of medical aid facilities to meet the needs of residents and visitors.
6. **To provide for the safe disposal of hazardous wastes.**
 - 6.1 The County should investigate the anticipated hazardous waste disposal needs of local enterprises including agricultural, geothermal, and mining industries to ensure that safe and adequate disposal sites are carefully planned.
 - 6.2 The County shall prevent incompatible land uses within close proximity to hazardous waste properties.
 - 6.3 The County should develop standards for the type, location, and intensity of development adjacent to sites and facilities for the production, use, storage, and disposal of toxic and hazardous materials.

TABLE IV-29

PUBLIC HEALTH AND SAFETY IMPLEMENTATION

<u>POLICY</u>	<u>IMPLEMENTOR/ ACTIVATOR</u>	<u>ACTION</u>	<u>PHASING/ TIMING</u>
<u>Public Health & Safety</u>			
<u>Noise Abatement</u>			
1.1, 2.1, 2.2, 2.3	Co. Air Pollution Control District, Planning Dept., Planning Commission	Maintain regulations for noise abatement; revise building, zoning, and subdivision code. Review projects, especially planned development and geothermal activity for noise impacts and methods of mitigation. Provide information on noise compatibility to builders, developers and public at large. Revise noise control ordinance provisions.	Continuously
1.2, 2.4	CalTrans, DPW, Planning Dept., Planning Commission	Maintain working relationship with CalTrans. Conduct noise studies for areas where new roads are proposed to insure that noise compatibility can be achieved.	Continuously
<u>Crime Prevention</u>			
3.1	Planning Dept., Sheriff, Planning Commission	Review development plans. Design with respect to safety. Require street lighting if necessary. Promote physical site planning which offers security and decreases crime potential.	Continuously
3.2	Sheriff	Provide public with information on the establishment of neighborhood watch programs.	Continuously

TABLE IV-29 (Continued)

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/ TIMING
<u>Emergency Planning</u>			
4.1, 4.2	DPW, Sheriff, Fire Districts, Planning Commission, Board of Supervisors, Planning Dept., Surrounding Counties.	Prepare evacuation plans and maintain communication linkages within County's agencies and with surrounding areas.	Immediately
4.3	Various public and private agencies and organizations.	Prepare information for the public explaining procedures in the event of a disaster.	Upon completion of 4.1 & 4.2
<u>Health Care Services</u>			
5.1	Planning Dept., Planning Commission, Board of Supervisors	Provide proper zoning in areas which would be suitable for the placement of medical aid facilities and services.	Continuously
<u>Hazardous Wastes</u>			
6.1	Planning Dept., Planning Commission, Board of Supervisors	Conduct a study to determine the needs for hazardous waste disposal sites and update the County's solid waste management plan.	2 years
6.2, 6.3	Planning Department, Planning Commission, Board of Supervisors	Develop regulations for the placement of hazardous waste sites. Develop standards for the use and the types of uses which would be compatible. Enforce existing hazardous waste development requirements.	6.2 Immediately 6.3 18 Months

V. RESOURCE MANAGEMENT AND CONSERVATION PLAN



INTRODUCTION

The Resource Management and Conservation Plan contains provisions relating to the management and conservation of Lake County's natural resources, and to the protection of life, health, and property from natural hazards. The natural resources addressed in the Plan include agricultural resources, land resources, water resources, air quality, plant and animal resources, cultural and archaeological resources, scenic highways, Clear Lake, and geothermal resources. Natural hazards identified include geologic and seismic hazards, flood hazards, and wildland fire hazards.

The policies are designed to ensure that the development of the County will not interfere with or destroy valuable natural resources, and that it will be sensitive to hazardous conditions. The intent of the Plan is not to prohibit all types of development and uses of land in natural resource and hazard areas. Rather, it recognizes the role that wise management of natural resources has in maintaining and enhancing the County's rural character and diverse recreational opportunities. At the same time, the Plan respects the desires of property owners to develop their property and suggests ways that this can be done, while maintaining the natural topography, vegetation, wildlife, and scenic beauty of the County to the greatest extent possible.

State planning law requires cities and counties to identify environmental resources and hazardous conditions existing within their boundaries. State law also requires the preparation and implementation of policies which relate to the utilization and management of these resources, while assuring public health and safety. The following sections of the State Government Code are addressed by the Lake County Resource Management and Conservation Plan.

- Section 65302(d) requires the preparation of a conservation element to specify policies for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers, and other waters, harbors, fisheries, wildlife, minerals, and other natural resources.
- Section 65302(e) requires preparation of an open space element that addresses the use of land for preservation of natural resources, managed production of resources, outdoor recreation, and public health and safety.
- Section 65302(f) requires preparation of a seismic safety element consisting of an identification and appraisal of seismic hazards.
- Section 65302(i) requires provisions for protection of the community from fires and geologic hazards.
- Section 56303 permits a community to prepare additional elements if they are of particular importance. Clear Lake and the geothermal resources located in the County merit special attention, because their use and development will greatly influence the development of the

entire County. Management of these resources is needed to ensure their value will be sustained and their full economic potential reached for the current and future generations of Lake County.

Land Capability and Suitability

As part of the General Plan process, an analysis of the development capability of the County's lands was undertaken. The objective of the analysis was to explicitly identify areas of the County possessing resource values or hazardous conditions. By directing the majority of the County's projected growth away from these areas onto lands more suitable for intensive development, it is possible to reduce risks to life, health, and property; decrease the high costs of mitigating against natural hazards; conserve natural resources; and minimize environmental disruption. Development, in the context of this specific analysis, means use of land to accommodate the majority of the projected population and employment growth.

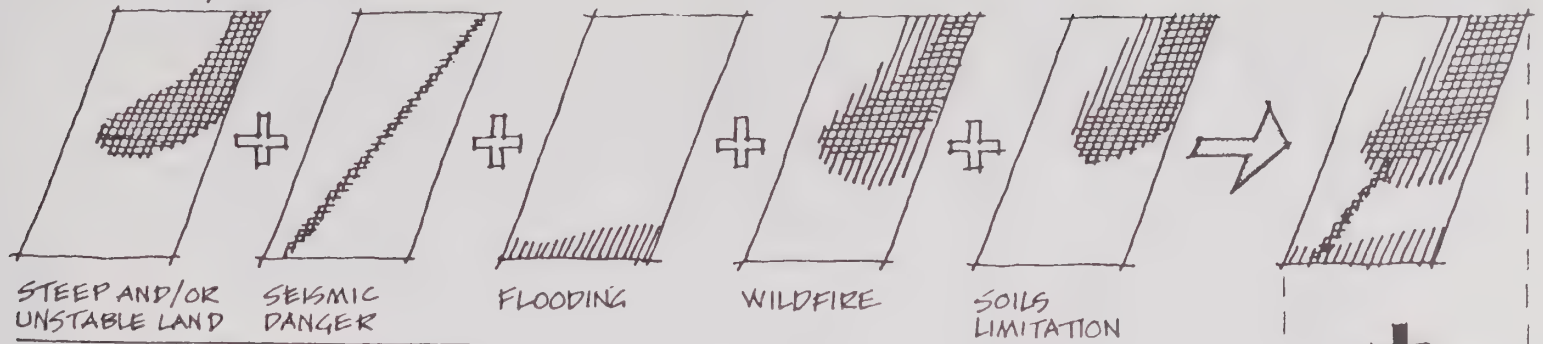
Development suitability of Lake County lands is determined by analyzing a number of factors which either present opportunities or constrain development potential. The factors used for this analysis include hazards, both natural and man-made, and natural resources. Also considered was the availability of public services and infrastructure, and the costs of extending services to outlying areas. This analysis is illustrated in Figure V-1 and resulted in the definition of three development suitability categories: highly suitable, moderately suitable, and generally unsuitable. It is important to note that development suitability ratings are relative. A rating of generally unsuitable for development should not be interpreted as a prohibition on all types of development. This rating means that other lands are better suited for development, as defined above, and that other types of development, characterized by a reduced building intensity may be appropriate.

The analysis revealed large land areas of moderate and high development suitability exist within Lake County. In total, 37,080 acres of vacant land have a high development suitability and 77,520 acres have a medium development suitability.

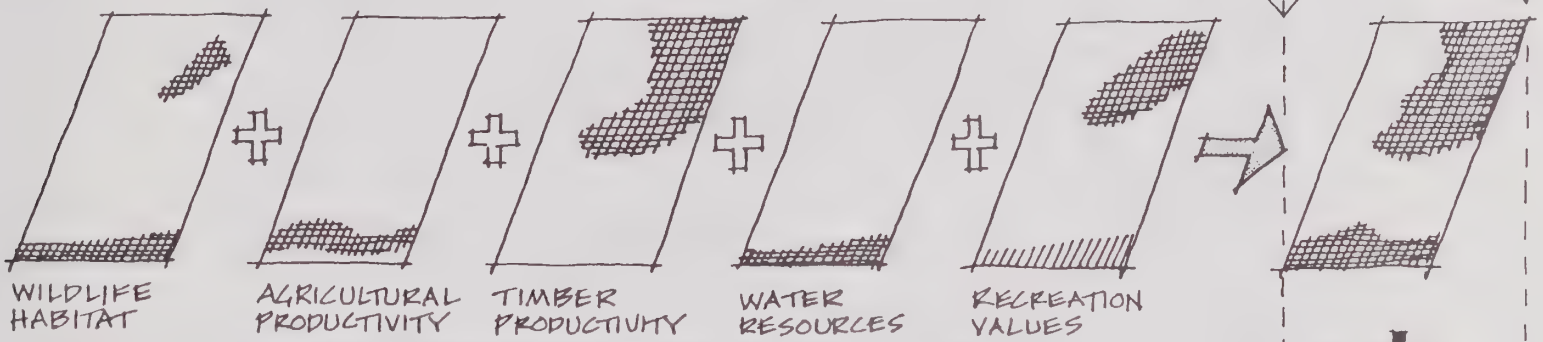
Figure V-2 shows the result of this analysis at a sub-County level. (The seven planning areas shown have significance only for the purposes of data collection and analysis.) The Lakeport subarea was found to have a large area of land with high suitability for development directly north of the City of Lakeport. A land supply profile was not developed for the Lake Pillsbury subarea due to the extensive federal ownership pattern. Given the area's rugged terrain and lack of access and infrastructure, this subarea is classified as having a low development suitability. Lands in the Upper Lake subarea found to be highly suitable for development were located in rural areas scattered in the northwest section of the subarea. Inaccessibility to these areas and lack of adequate water resources serve as constraints to the development of these lands. The Eastern Lake subarea contains only a small amount of land suitable for development, most of which is located at the eastern end of the High Valley. Extensive areas of high and moderate development suitability exist with the Southeastern Lake subarea. The majority of these lands surround the larger urban areas of Clearlake Park,

HAZARDS/CONSTRUCTION CONSTRAINTS

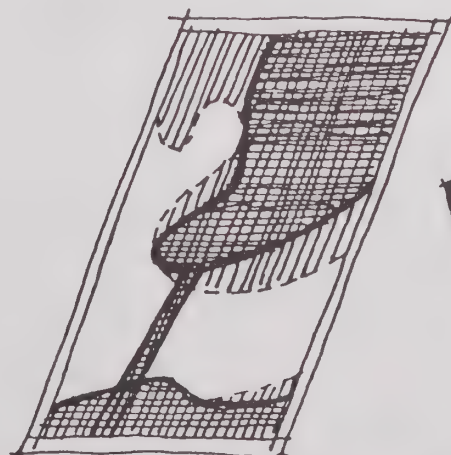
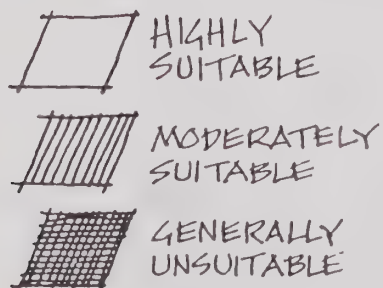
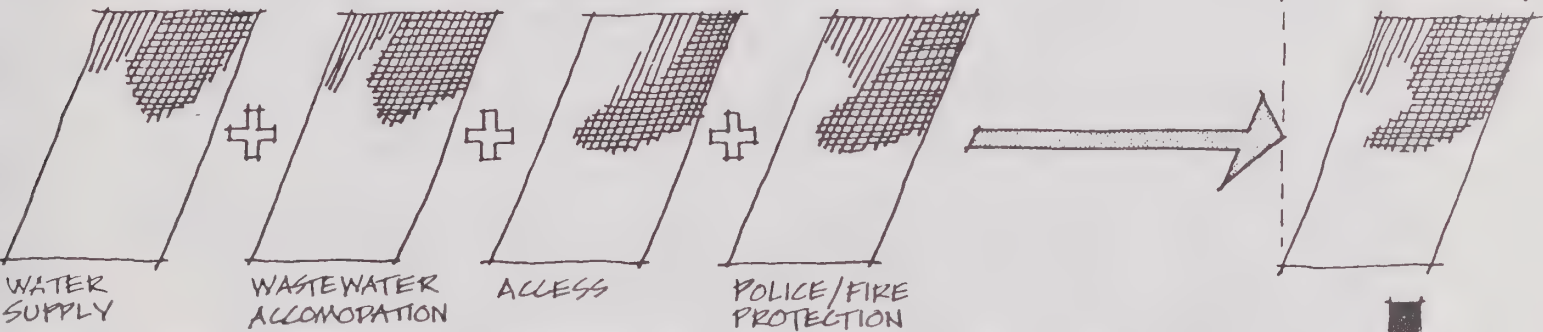
COMPOSITES



NATURAL RESOURCES



PUBLIC SERVICE FEASIBILITY



FINAL COMPOSITE

Figure V-1 COMPOSITE ANALYSIS OF LAND SUPPLY-SUITABILITY FOR DEVELOPMENT PURPOSES



Figure V-2 Development Suitability

LAKE COUNTY, CALIFORNIA

This map shows generalized data. Detailed maps are on file with the Lake County Planning Department.

Clearlake, and Lower Lake. The low development potential of the Big Valley subarea relates to the predominance of soils with high agricultural resource value. The Middletown subarea's lands with development suitability are scattered throughout the subarea with limited access and lack of adequate water supplies constraining their development.

AGRICULTURAL RESOURCES

Agricultural and Soil Resources

Agricultural lands are a major contributor to the economic base and beauty of Lake County. The County's agricultural potential is largely determined by the availability of soils having few natural limitations on their use, but also depends on topography, availability of water, climate, and technical know-how of the farmer/rancher. The United States Soil Conservation Service has developed a classification system which groups soils into eight classes based on their agricultural potential. The eight classes are designated by Roman numerals I through VIII.

Class I and II lands include those soils that have few limitations, the widest range of use, and the least risk of soil deterioration. The other soil classifications have progressively greater natural limitations. All of the land in Classes I and II are considered prime agricultural lands. These lands are highly conducive to agricultural production because they require little or no special treatment other than normal, good soil management.

Class III land is suitable for cultivated crops but requires additional attention to offset or overcome inherent soil limitations.

Class IV soils are considered suitable for limited cultivation. The lands in Class V, VI, and VII are best adapted to range and woodland plants. The Lands in Classes V and VI can be put into agricultural cultivation; however, improvements to soil fertility through planting, seeding, and/or frequent fertilizing make range or woodland improvements impractical. Under proper management, these lands could be used for grazing, woodland, or wildlife habitat. Class VII and VIII lands have severe restrictions, such as very shallow, stony soils, extremely rocky areas or exceedingly steep slopes, that preclude commercial use of the land.

In Lake County 37,446 acres of Class I and II lands have been identified (see Table V-1). Most of this prime agricultural land occurs in valleys or areas with relatively flat topography. Bachelor Valley, Scotts Valley, and Big Valley are the largest continuous agricultural areas in the County. Other major agricultural areas extend from the Rodman Slough past the community of Upper Lake to Clover Valley.

Classes III - IV lands also have considerable agricultural potential. Vineyards have become more common in the northern part of Big Valley and in the Lower Lake area. Smaller irrigated agricultural areas occur east of Clear Lake, and through the southeast portion of the County. Extensive areas of the County, totalling about 77,900 acres, are used as improved rangeland for livestock production. However, the most viable livestock

operations are found on Class I - IV soils. (Figure V-3 shows Classes I - IV lands.)

Fruits and nuts represent the major agricultural crops grown. Pears, walnuts, and grapes account for over 70 percent of the total agricultural production in 1980. The pear crop grown in Lake County accounts for 49 percent of the State's fresh market pear production. The total gross value of agricultural products has more than tripled since 1970, reaching \$36,878,305 in 1980.

Lake County has over 72,800 acres of land considered suitable for cultivation based on soil capability. However, Lake County's agricultural lands, like most agricultural areas in the nation, face severe threats to their continued productivity. The conversion of agricultural land to urban land uses has had the most direct impact. The loss of agricultural land from urban expansion is depriving Lake County of the many benefits of sustained agricultural land use. The most significant of these benefits include:

- the contribution of agricultural operations to the County's economy;
- the contribution of agricultural lands to ecological balance; and
- the contribution of agricultural operations to the County's rural lifestyle.

To provide for the future production of needed food supplies, as well as to promote the continued presence of agriculture in the County, there is a need to preserve lands where agriculture is or can become economically viable. This can only be achieved through the promotion of growth patterns with a commitment to agriculture preservation.

TABLE V-I
LAKE COUNTY AGRICULTURAL POTENTIAL¹

<u>Soil Class</u>	<u>Acres</u>
I and II	37,446
III (adjacent to Classes I and II) ²	9,868
III and IV	<u>25,529</u>
Total	72,843

¹Measurements made by Sedway/Cooke. Acreage figures do not include those lands which have been preempted by development. By way of example, the City of Lakeport is situated upon Class III soil (adjacent to Classes I and II). In this case the soil acreage was not included as "potential" agricultural land.

²For purposes of analysis, the agricultural suitability of Class III soils is determined based upon proximity to Classes I and II. Since a large amount of Class III soils are interspersed with prime soils (I and II) it is important to treat those lands in a similar manner, respecting their value as an agricultural resource.

Source: General Soil Map, Lake County, California (Sheets I and 2): Soil Conservation Service, U.S. Department of Agriculture, 1967, 1:125,000; Lake County Soil Survey: Soil Conservation Service, U.S. Department of Agriculture, 1966; Sedway/Cooke, 1980.

Policies and Objectives

1. To preserve and maintain the County's valuable agricultural lands.

- 1.1 The County should encourage the preservation of agricultural lands, both those in production and those with potential productivity. Agricultural lands are defined as Class I - IV soils.
- 1.2 Non-agricultural development should be directed onto marginal agricultural lands (capability Class V through VIII), and avoided whenever possible from lands of Classes I-IV.
- 1.3 Land uses in areas designated for intensive agriculture should be limited to agriculture and uses necessary for the support of agriculture. Appropriate activities include horticulture, tree crops, row and field crops.
- 1.4 Extension of services, such as sewer and water lines and roadways, into areas preserved for agriculture use should be avoided. Where necessary, they should be located in public rights-of-way in order to prevent interference with agricultural operations and ease of access for operation and maintenance. Service capacity and length of lines should be designed to prevent the conversion of agricultural lands into urban/suburban uses.
- 1.5 Whenever possible, non-agricultural development should be separated from agricultural lands by buffers or transitional areas sufficient to mitigate potential land use conflicts.
- 1.6 The County should discourage the parcelization of land within designated agricultural areas which divides land into units too small to economically support a viable agricultural operation and which contributes to the transition of agricultural lands to non-agricultural uses.
- 1.7 When feasible, the recombining of agricultural parcels to make economic farm units should be encouraged.
- 1.8 The County should continue to support programs of agricultural technical assistance and should cooperate with public and private groups to promote economic development of agricultural areas.

LAND RESOURCES

Land resources depicted on the map include timber resources and mineral resources. These resources contribute significantly to the County's natural and economic base. Forested lands also provide wildlife habitat, and are critical to Lake Superior. Protection and sound management of these land resources is essential to assure that their economic and aesthetic values may be realized.



Figure V-3 Land Resources

LAKE COUNTY, CALIFORNIA

This map shows generalized data.
Detailed maps are on file with the
Lake County Planning Department.

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Sedway/Cooke



TABLE V-2

AGRICULTURE IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
<u>Agriculture</u>			
1.1	Planning	Revise Zoning Ordinance. Review and revise County's Uniform Rules for establishing agricultural preserves under the Williamson Act (G.C. Sec. 81200 et. seq.).	18 months
1.2	Board of Supervisors Planning Commission, Planning Dept.	Revise Zoning Map.	Upon completion Revised zoning ordinance.
1.3	Board of Supervisors, Planning Commission, Planning Dept.	Revise zoning ordinance - (agricultural zoning district with regard to permitted and conditionally permitted uses).	18 months
1.4	Special Districts, Planning Dept.	Review and revise sewer use ordinance.	18 months
1.5	Board of Supervisors, Planning Commission, Planning Dept.	Revise zoning text and map.	Upon completion of revised zoning ordinance
1.6	Planning Dept., Planning Commission, Board of Supervisors	Revise zoning ordinance.	18 months
1.7	Planning Dept., Planning Commission, Board of Supervisors	Revise subdivision ordinances to provide for merger, reversion to acreage of agricultural lands.	18 months
1.8	Agricultural Commis- sioner, Board of Super- visors	Resolution of Support.	Continuously

Timber Resources

Timber production in Lake County is fairly limited. Ponderosa Pine and Douglas Fir are the principal trees harvested. The north central area of the County contains the majority of existing forest acreage. Areas that have potential for future timber production include those with needleleaf evergreen forests or woodlands. In 1979, the County's timber harvest was valued at \$1,775,000.

Most of the County's timber acreage falls on public lands which are subject to the regulatory authority of federal and state agencies. These timber lands include the following lands.

- 252,794 acres of County land fall within the borders of the Mendocino National Forest, where the United States Forest Service is responsible for management of timber resources.
- 123,035 acres of County land are managed by the United States Bureau of Land Management.
- California's forest lands are managed by the California State Department of Forestry. Boggs Mountain State Forest has been designated as a Timberland Preserve Zone (TPZ).

On private lands, the County Assessor has identified property suitable for TPZ classification. (See Figure V-3 for land designed TPZ.) By zoning lands TPZ, the County has protected its timberlands for timber production or for other compatible open space uses.

Mineral Resources

Much of Lake County's mineral wealth is due to its past volcanic activity. Sand and gravel extraction constitute the major portion of the County's mining activity, both in terms of quantity of material produced and value of extracted resource. It is estimated that the current annual gravel and sand extraction is 200,000 cubic yards, with major operations occurring along segments of Scotts, Middle, Kelsey, Putah, North Fork of the Cache, and Clover Creeks. Gravel, cinder, and rock extraction sites are shown on Figure V-3. The County recently adopted a Creek Management Plan which regulates sand and gravel extraction limits from local streams and creeks. In addition to providing specific extraction policies for fourteen local streams, the Creek Management Plan also helps to streamline the environmental review and permitting process.

Concern over the environmental impacts of gravel extraction in the County has been expressed by County residents. It has been suggested that gravel extraction adversely affects some aquifers by decreasing the amount of groundwater for agriculture during the irrigation season. Other concerns include stream or creek degradation, erosion or scouring of stream banks, and land subsidence resulting from reduced groundwater recharge.

However, by imposing extraction limits for each stream and requiring stream profiles, biannual cross sections, and Reclamation Plans for all

gravel extraction projects removing over 1,000 cubic yards of material per year, the County is attempting to significantly reduce these potential impacts. The Lake County Flood Control and Water Conservation District works closely with sand and gravel extractors in an effort to correct or reduce flooding and erosion problems.

At the same time, sand and gravel are vital resources for development, as they are often the source of aggregate for the construction and paving industries. As a bulky, heavy product, it is expensive to transport, so a deposit of sand and gravel close to developing areas is a valuable asset. It is important to insure that the nonrenewable resource deposits do not become depleted or unusable as a result of unplanned growth.

Gold is also mined in Lake County. Recent gold deposit discoveries made near the Knoxville area have resulted in renewed interest in the mining of this mineral. Also, silver has been intermittently mined in Lake County.

Geothermal Resources, both dry steam and hot water underlie much of the southern portion of Lake County. Development of steam supply fields and electrical generating plants is occurring in the area of proven steam reservoirs in the southwestern area known as "The Geysers". It is reasonable to expect expanded development of the resource both for electrical generation and for direct heat applications in areas where new resources of commercial quality are discovered as neither steam nor hot water can be transported effectively for long distances.

Objectives and Policies

The following policy areas are discussed:

1. Forest Lands
2. Mineral Resources

1. To protect, manage, and develop forestry resources and forest lands.

- 1.1 The County should place qualifying forest lands in Timberland Preserve Zones.
- 1.2 The County should encourage development of forest lands with the potential for timber production in a manner that will not preclude future forest activities. Compatible development includes outdoor recreation activities, agriculture, rangeland, wildlife habitat, watershed, and campgrounds.
- 1.3 Activities permitted in forest lands should be carried out in an orderly manner that preserves soils, public safety, high water quality, and watershed functions.
- 1.4 The County should promote wood fuel production to stimulate the local economy and to offer an alternative energy source.

2. To protect, manage, and develop mineral resources.

- 2.1 The County should encourage the planned management of its valuable mineral deposits, geothermal resources, and construction materials, such as sand and gravel.
- 2.2 The County should support the regulation of mineral extraction activities to minimize hazards and conflicts with existing land uses and sensitive natural resources.
- 2.3 The County should encourage the protection and restoration of the appearance and ecological/economic value of mineral extraction areas, particularly in areas also suitable for groundwater recharge and wildlife habitat.
- 2.4 Creek management and Reclamation Plans should address, where appropriate, the protection and restoration of vegetation, wildlife, watershed, groundwater, range and forage lands.
- 2.5 The development of lands surrounding existing or potential mineral extraction sites should be carefully reviewed to minimize the impacts of the proposed development on extraction activities. Low intensity activities such as agriculture, outdoor recreation, and rural land development, or forestry would be appropriate.

WATER RESOURCES

Water, its abundance and availability, is vital to Lake County. It is essential for the County's agricultural operations, it is needed to assure that development opportunities are fulfilled; it is one of the key attractions for thousands of summertime visitors; and it is needed to enable wildlife habitats to flourish.

The origin of the County's water resources is precipitation, including both rainfall and snowfall. Average precipitation varies from 22 inches at Clear Lake to 80 inches in the Mayacmas Mountains in the southwestern portion of the County. Three major drainage basins are defined by the County's topography: Upper Eel River which drains westerly into the Pacific Ocean, Clear Lake Basin which drains easterly into Yolo County, and the Upper Putah Creek which drains southerly into Napa County. Each major watershed is composed of smaller hydrological units, formed by streams, creeks, groundwater basins, and the terrain of the area. (See Figure V-4 for a map of the County's water resources.)

Lake County's surface water resources include numerous lakes, reservoirs, streams, creeks, springs, and ponds whose waters serve the needs of man and nature. Higher order perennial streams supply water for natural groundwater recharge and convey water to major lakes and reservoirs. Lower order streams supply intermittent flows and provide important habitats for wildlife. The County's major lakes store water for domestic use, and also provide quality environments for tourists and County residents alike.

TABLE V-3

LAND RESOURCES IMPLEMENTATION

<u>POLICY</u>	<u>IMPLEMENTOR/ ACTIVATOR</u>	<u>ACTION</u>	<u>PHASING/TIMING</u>
Land Resources (Page V-13)			
1.1	Planning Dept., Planning Commission, Board of Supervisors, Assessor, Private Land Owner	TPZ zoning should be designated on appropriate lands selected from Assessor's list A & B and General Plan Figure V-3, or reviewed upon owner request.	12 months
1.2	Planning Dept., Planning Commission, Board of Supervisors	Zoning Ordinance and Map revisions, Resource Conservation Overlay Zone, Consultation and Cooperation with appropriate agencies. Open, CEQA review process.	18 months or upon revision of Zoning Ordinance
1.3	Planning Dept., Planning Commission, Board of Supervisors, Soil Conservation Service, Flood Control & Water Conservation Dist., U.S. Forest Service	Zoning Ordinance and Map revisions, Resource Conservation Overlay Zone, Consultation and cooperation with appropriate agencies. Enact a land capacity ordinance.	18 months or upon revision of Zoning Ordinance

TABLE V-3 (continued)

LAND RESOURCES IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
1.4	Planning Dept., Planning Commission, Board of Supervisors, Soil Conservation Service, Flood Control & Water Conservation Dist., U.S. Forest Service	Zoning Ordinance and Map revisions, Resource Conservation Overlay Zone, Consultation and cooperation with appropriate agencies. Open, CEQA review process.	18 months or upon revision of Zoning Ordinance
<u>Mineral Resources</u> (Page V-13)			
2.1 & 2.2	Planning Dept., Planning Commission, Board of Supervisors, Flood Control Water Conservation Dist., Div. of Mines & Geology	Maintain up-to-date Mineral and Geothermal Resource maps. Zoning revisions to discourage further residential development in close prox- imity to existing mineral resource extraction sites. Enact Resource Conservation overlay zoning for large scale quarry/mineral extraction and processing operations. Continue and expand Creek Management Plans and Mineral Reclama- tion Plans. CEQA review and use permit process. Consultation and cooperation with appropriate state and federal agencies, etc.	18 months or upon completion of Zoning Ordinance

TABLE V-3 (continued)

LAND RESOURCES IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
2.3	Planning Dept., Planning Commission, Board of Supervisors	Creek Management Plans & Reclamation Plans should address these concerns. Cooperation with the state and federal agencies with mutual responsibilities. CEQA review and use permit process. Land Capacity Ordinance and Resource Conservation Overlay Zone.	Continuously and upon completion of Zoning Ordinance
2.4	Planning Dept., Flood Control Water Conser- vation Dist., Board of Supervisors, Planning Commission	Self explanatory.	Continuously
2.5	Planning Dept., Planning Commission, Board of Supervisors	Zoning revisions to discourage further residen- tial uses in close proximity to known resource areas.	Continuously and upon completion of Zoning Ordinance

Currently, the most significant source of water supply in the County is groundwater. Groundwater is contained in underground formations called aquifers which, in the case of Lake County, are composed of either volcanic materials or young alluvial materials such as sand and gravel. Water stored in aquifers is released to the surface through wells and springs or by seepage into lakes, rivers, and wetlands. Just as groundwater ultimately returns to the surface, it is also replenished from the surface. Water from streams and lakes seeps down into aquifers, or where aquifers or transmitting formations are exposed to the surface, precipitation percolates directly into the aquifers. Consequently, the groundwater reservoirs moderate surface flow by absorbing water during rains or periods of high flow and then gradually releasing it during periods of low flow. With limited information available, it appears that most groundwater basins replenish their supply. However, in the Scotts Valley and Big Valley Basins, a steady decline in the water table has been detected, suggesting a serious deterioration in supply (i.e., water consumption in these basins is greater than their recharge ability).

With the rapid rate of growth experienced by the County in the last decade, existing water supplies in certain parts of the County are taxed to meet the present demands for municipal and domestic users and are less than adequate for agricultural users. As a general rule, agricultural users must rely on groundwater supplies because of the concentrations of agents harmful to agriculture found in lake water. In order to accommodate anticipated future growth, new water supplies must be developed. The appropriation of Clear Lake water rights to Yolo County will have a significant impact on options available to Lake County for expanding its water supply.

Pollution to groundwater and to the lake has been a problem in the Clear Lake Basin due to inadequate municipal and individual wastewater disposal facilities. This problem has been most critical in areas adjacent to Clear Lake where unsuitable soil conditions, high water tables, and inadequate facilities to process waste exist. Water drawn from Clear Lake must be treated for domestic use due to high turbidity and microbiological activity.

Objectives And Policies

The following policy areas are discussed:

1. Protection of County's water supply and quality.
 2. Development of additional water sources.
- 1. To preserve and protect the supply and quality of the County's water resources.**
- 1.1 In known groundwater recharge areas, the predominant land use should be one that allows the continued recharge of the groundwater basin. Clustered development should be encouraged to promote open space and maintain infiltration.
 - 1.2 New residential development should demonstrate adequate quantity and quality of water for all uses, including fire protection, prior to the approval of new residential lots or structures.



Figure V-4 Water Resources

LAKE COUNTY, CALIFORNIA

This map shows generalized data
Detailed maps are on file with the
Lake County Planning Department

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Sedway/Cooke

- 1.3 Development over or immediately adjacent to any water courses or body of water should be designed to ensure that water quality is not adversely affected by soil erosion, by direct discharge of potentially harmful substances, by ground leaching from storage of raw materials, petroleum products, or wastes, by floating debris, or by runoff from the site.
2. **To encourage the development of additional water sources to ensure the availability of an adequate, future supply of water.**
 - 2.1 The County should encourage the development of additional water sources through the expansion of water storage reservoirs, increased utilization of Clear Lake, and promotion of water conservation programs.
 - 2.2 Opportunities to expand the use of reclaimed wastewater for irrigation of agricultural lands, and large landscaped areas should be promoted where economically feasible.
 - 2.3 The County should encourage discussion between the water agencies of Lake County and Yolo County to promote development of joint water projects and other efforts to expand water supply.

PLANT AND ANIMAL RESOURCES

Lake County is endowed with a number of significant natural areas including mountain regions, valleys, forest lands, stream corridors, and lake areas. These distinctive environments, in turn, support a wide variety of plant and animal life.

The riparian lands and wetlands located in the County provide some of the most important fish and wildlife habitat. Lake county's many streams possess valuable riparian communities, rich in diverse fish and wildlife. The wetlands, located around the periphery of the County's many lakes also are important wildlife habitats and spawning grounds for fish.

The California Natural Area Coordinating Council completed an inventory of the biological, geological, and paleontological features of the County and selected 33 areas of special environmental significance. Figure V-5 shows the location of these areas. These areas are noteworthy due to their particular scientific and educational interest, rare and endangered species, relict or disjunct species, noteworthy geologic areas and areas of historic interest.

Undisturbed habitat is the key to the abundance and well-being of the County's wildlife. The entire County falls in black-tailed deer range with the largest populations occurring in woodland/grass and chaparral areas. Tule elk can also be found in the County. Black bear and bobcat are known to live in the fir/pine/chaparral areas, particularly in Wilson Valley.

TABLE V-4

WATER RESOURCES IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
<u>Water Resources</u>			
1.1	Planning Dept., Planning Commission, Board of Supervisors	Implement land capacity ordinance.	18 months
1.2	Health Dept. and Fire Dept.	Implement Land Capacity Ordinance, EIR Guidelines.	Continuously
1.3	Planning Dept., Planning Commission, Board of Supervisors	Implement Land Capacity Ordinance, Zoning Ordinance, subdivision design regulations.	Continuous upon revision of County Ordinance
2.1	Planning Dept., Flood Control Water Conservation Dist.	Implement Management Plan, revise Zoning Ordinance.	Upon revision of County Ordinance
2.2	Flood and Water Conservation Dist. Agricultural Commissioner, Planning Dept.	Augment water conservation program.	Continuously
2.3	Board of Supervisors Flood and Water Conservation Dist., Planning Dept.	Joint power/legal agreements, etc.	Immediate

Over 300 species of birds have been sited in Lake County. Mountain and California quail are fairly abundant throughout the County, principally in the fir/pine/chaparral areas. Pheasant can be found throughout the agricultural lands. The bald eagle, a federal and state listed endangered species, has been sighted in several areas, notably in the Blue Lakes region, Wilson Valley, and Anderson Marsh. The peregrine falcon, also a federal and state listed endangered species, has been sited in the Cobb Mountain area. Predominant waterfowl include western and pied-billed grebes, the Great Blue Heron, osprey, mallards, green-winged teal, cinnamon teal, and the ruddy duck. The County has also become known for its abundant grebe population.

Clear Lake and its tributaries support several species of warm water game and nongame fish including crappies, bass, catfish, bullhead, bluegill, and sunfish. The Eel River contains silver salmon, salmon, and steel head trout. The Blue Lakes have had various species of fish introduced.

Lake County also supports several plant species included on the list of endangered or rare plant species as designated by the Fish and Game Commission pursuant to the California Native Plant Protection Act, effective October 5, 1979. Endangered plant species include Brodiaea cronaria spp. rosea (Indian Valley brodiaea) located near Hough Springs, Hespeolinon didymocarpum (Lake County dwarf flax) sited in the Middletown vicinity, Lasthenia burkei (Burke's baenia) found around Clear Lake, Navarretia plicata (many-flowered navarretia) sited near Boggs Lake, Orcuttia tenuis (slender orcutt grass), and Orthocarpus succulentus (succulent owl's clover).

The fish and wildlife of the County represent recreational, natural, and economic values, providing their habitat is protected. Important wetland areas, particularly around Clear Lake, have already been lost to commercial and residential development. These natural areas contribute greatly to the County's quality of life, as well as supporting such activities as fishing, hunting, and hiking. Environmentally sensitive areas located in Lake County other than those identified by the California Natural Areas Coordinating Council, in need of protection and preservation include: wetlands, riparian lands, and rare and endangered species habitats. (See Figure V-6)

Objectives And Policies

- I. To preserve and protect environmentally sensitive significant lands and waters valuable for their plant and animal habitat, and natural appearance and character.
 - I.1 The County should ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare and endangered.
 - I.2 The County should consider the environmentally sensitive areas shown on Figures V-5 and V-6 as areas of natural significance and limit the encroachment of development into these areas when possible.

- Development proposed in these areas should be permitted only after a site specific investigation is conducted to define the extent and fragility of the habitat and suitable mitigation measures for any impacts. (However, this environmental study may be waived if other studies have been conducted in the vicinity revealing no impacts on the area or if it has been otherwise determined that the proposed project would not result in adverse impacts). To avoid unnecessary costs and duplication, the site investigation should meet the requirements of the California Environmental Quality Act.
 - Clustered development should be encouraged in these areas, where applicable.
 - Roads and buildings shall be set back from riparian corridors to avoid damage to habitat. The County should review proposed development plans and site investigations.
- 1.3 The development and enhancement of wildlife habitat through controlled burning, planting, livestock grazing, mechanical land manipulation, and creation of ponds should be encouraged.
 - 1.4 When planning any development or alteration of a site with identified wildlife or plant life habitat (as shown on Figure V-5 and V-6), consideration should be given to ways of protecting the habitat.
 - 1.5 Creek Management Plans and Mineral Reclamation Plans should include measures to protect and maintain riparian resources.

CULTURAL AND ARCHAEOLOGICAL RESOURCES

Less than 5% of Lake County's land area has been inspected in an effort to locate and record cultural resources. However, this limited work has indicated that the County's cultural resources are varied and unique. Archaeologically, the Clear Lake basin contains one of the highest densities of prehistoric sites in the state. Lake County is the location of the Mostin site which may be the oldest Indian village in North America (11,260 years old). Historically, Lake County contains sites and structures which depict nearly all of the major social, economic, and technological developments which have served to shape this region. Culturally, Lake County is the home of a large indigenous Native American population which has diligently worked to maintain its traditional character and identity.

The protection and enhancement of these cultural resources serves numerous purposes. Many archaeological and historical sites are suitable for public display which can enhance the County's tourist industry. This was demonstrated by the recent appropriation of \$2,000,000 in funds for the establishment of a State Park Cultural Preserve in Lake County. Cultural resources have long been used for educational purposes providing both local and visiting schools with a visual "hands-on" means of teaching California



Figure V-5 Natural Areas

LAKE COUNTY, CALIFORNIA

This map shows generalized data.
Detailed maps are on file with the
Lake County Planning Department

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Sedway/Cooke





Figure V-6 Critical Resource and Conservation Areas

LAKE COUNTY, CALIFORNIA

This map shows generalized data

TABLE V-5

PLANT AND ANIMAL RESOURCES IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
<u>Plant and Animal Resources</u>			
1.1, 1.2, 1.4	Planning Dept., Planning Commission, Board of Supervisors	Zoning ordinance and map revisions should be enacted to assign low intensity uses to sensitive wildlife and habitat areas. Policy 1.2 should be implemented through revisions to the zoning ordinance and CEQA implementation rules. Resource Conservation Overlay Zones should be enacted for higher priority areas. Planned Development permit process emphasizing clustering and avoidance of sensitive habitats should be required in areas where higher intensity land use proposals may be considered. Public acquisition of the most sensitive areas should be pursued. Riparian habitats can also be protected by Creek Management and Mineral Reclamation Plans and Flood Hazard Zoning. Early consultation and cooperation with such agencies as Calif. Dept. of Fish & Game, BLM, Forest Service, etc. should be reflected in CEQA documents and use permit conditions.	18 months or revision to Ordinance

TABLE V-5

PLANT AND ANIMAL RESOURCES IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
<u>Plant and Animal Resources</u> (Page V-23)			
I.3	Planning Dept., Planning Commission, Board of Supervisors, Flood Control and Water Conservation Dist., Resource Conservation Dists., Bureau of Land Management, Dept. of Fish & Game, Agricul- tural Commissioner	Implementation would be largely the respons- bility of state and federal agencies responsible for wildlife and land management. County park and flood control projects as well as local use permit conditions should reflect these concerns.	Continuously
I.5	Planning Dept., Planning Commission, Board of Supervisors, Flood Control and Water Conservation District.	Self-explanatory.	

history and prehistory. Lastly, by studying Lake County's cultural resources, scientists are able to reconstruct past cultural patterns and learn about contemporary cultural processes, providing us with a better understanding of our own strengths and weaknesses.

Unfortunately, the majority of Lake County's cultural legacy is fragile and non-renewable. Historic and archaeological sites are easily damaged and destroyed by surface and subsurface ground alteration. Due to the fragile nature of these resources several state and federal laws have been enacted in an effort to manage and protect cultural resources. These include: California Environmental Quality Act of 1970, sec. 15082, 21060.5, Appendix G, Item j; Health and Safety Code sec. 5097.5, Executive Orders 11593 and B-64-80, Federal Antiquities Act of 1906, Historic Sites Act of 1935, Reservoir Salvage Act of 1960, National Preservation Act of 1966, National Environmental Policy Act of 1969, Archaeological Salvage Act of 1974 and Native American Religious Freedom Act of 1978.

Objectives And Policies

- 1. To manage and protect sites of cultural and archaeological importance for the benefit of present and future generations.**
 - 1.1 The County should participate in and support efforts to identify its significant cultural and archaeological resources.
 - 1.2 The County should encourage the protection of cultural and archaeological sites with potential for placement on the National Register of Historic Places and/or the designation as a State of California Landmark. Such sites may be of statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values.
 - 1.3 When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development should be permitted in these areas only after a site specific investigation has been conducted to define the extent and value of resource, and mitigation measures proposed for any impacts the development may have on the resource.
 - 1.4 The County should support local, state, and national education programs on cultural and archaeological resources.

GEOLOGIC AND SEISMIC HAZARDS

Geologic hazards occurring in Lake County result from unstable slopes, ground failure, unstable soils, and volcanism. Seismic activity poses hazards to developed areas in the County by ground displacement, ground failure, and ground shaking.

TABLE V-6

ARCHAEOLOGICAL AND CULTURAL RESOURCES IMPLEMENTATION

<u>POLICY</u>	<u>IMPLEMENTOR/ ACTIVATOR</u>	<u>ACTION</u>	<u>PHASING/TIMING</u>
<u>Cultural Resources</u>			
1.1	Planning Dept., Planning Commission	Establish review procedure for the early identification of cultural resources in the planning process.	18 months
1.2	Planning Dept., Planning Commission, Board of Supervisors	Establish cultural heritage zone. Establish ordinance for the protection of identified cultural sites from vandalism.	Upon completion of Ordinance
1.3	Planning Dept., Planning Commission	Establish procedures for mitigating impacts and protecting cultural resources. Contract with a qualified cultural resource coordinator for the development of the review procedures and ordinances for the protection of cultural heritage resources.	During Zoning Ordinance Revision
1.4	Planning Dept.	Develop informational pamphlet pertaining to cultural resources for distribution to the public.	Upon completion of Zoning Ordinance

Unstable Slopes

The major geologic hazard facing the County is that associated with slope instability. As slope increases, so does the potential for hazardous conditions to human life and structures situated in the area. Land having an average slope of 30 percent or greater is generally considered less suitable for intensive development because it is difficult and costly to develop. Figure V-7 identifies lands in the County with a slope of 30 percent or greater.

Landslides induced by seismic activity, heavy rains, or construction activities present a risk to human life and property located in or directly below hill areas. Due to the hilly terrain and subsurface geology of Mesozoic Franciscan Formation, large areas along the Mayacmas Mountains and north of Highway 20 are prone to slope failure. These areas constitute slightly over 40% of the County's area. No recent landslides have been identified in the County, although the potential for failure does exist in these areas, especially in previous landslide debris areas. Figure V-7 shows unstable landslide areas and existing unconsolidated landslide debris. Areas prone to landslides require a sufficient amount of open, undeveloped space to ensure public safety.

Ground Failure

Subsidence and ground failure due to seismic activity (discussed under seismic activity) are two potential forms of ground failure which could occur in Lake County. Subsidence is a localized downward movement of ground surface with little horizontal movement. It is usually caused by the collapse of underground voids such as mines or caverns, by excessive groundwater withdrawals, or by extraction of oil. Subsidence may damage all types of construction, including: buildings, sewage disposal works, water pipes, gas lines, and roads.

The likelihood of local subsidence problems occurring due to the withdrawal of vapor dominated geothermal resources appears remote. Substantial subsidence due to local geothermal development has not been noted to date. However, geothermal development has only occurred in areas of Lake County characterized by dry steam resources at relatively deep locations. Development of liquid dominated geothermal resources, particularly in residential and agricultural areas, should require careful monitoring to insure that subsidence problems do not occur.

Unstable Soils

Expansive soils expand in volume when wet and shrink in the process of drying. Structures built on soils having this characteristic may suffer extensive damage if conditions exist which favor the shrink-swell phenomena. Such soils are widespread throughout the County, as over half of its area is underlain by soils classified moderately to highly expansive. Mitigation of this hazard requires engineering and design precautions.

Soil erosion is another common form of soil instability. Erosion is a function of soil type, slope, rainfall intensity, and groundcover. It accounts for

a loss in many dollars of valuable soil, is aesthetically displeasing, and often induces even greater rates of erosion and sedimentation. Sedimentation is simply the accumulation of soil as a result of erosion. Construction activities often contribute greatly to erosion and sedimentation. Besides being a pollutant in its own right, sediment acts as a transport medium for other pollutants, especially nutrients, pesticides, and heavy metals, which absorb to the eroded soil particles. As the sediment drains into water courses, the combination of these pollutants adversely affects water quality. Clear Lake water quality suffers from high naturally occurring sedimentation.

Volcanism

The southern half of Lake County is one of the sixteen areas in California identified as likely to experience a future volcanic eruption. Mount Konocti is the most recent, large volcano in the County. Further evidence of possible volcanic activity is indicated by the area's known geothermal resources, apparently originating in a shallow magma (molten rock) chamber.

Seismic Activity

Within the past 200 years, no major damaging earthquakes have occurred along faults in Lake County. However, numerous faults exist within the County, designated potentially active, which could cause ground rupture, failure and shaking. (Potentially active faults are defined here as those faults that have affected Quaternary earth material, i.e., materials dating back two million years.) Precise locations of these faults are not well established. It appears that the greatest number of faults occur in the southwestern portion of the County, starting at the Cobb Mountain area and running from the Hopland grade to the southern County line. The southeastern portion of the County also appears to have considerable faults, particularly from Grizzly Peak eastward and running from Knoxville to the southern County line (see Figure V-7).

Active faults within the vicinity of Lake County include the San Andreas (within 30 miles) and Healdsburg (within 15 miles). These faults have been responsible for the moderate to major earthquakes experienced in the County.

Objectives And Policies¹

I. To reduce the risk to life and property and increased governmental costs from seismic occurrences and geologic hazards.

- 1.1 There exists a direct relationship between the degree of slope and the associated hazards on any given soil and geologic situation. In Lake County soils and geology are complex, making for a wide variety of conditions when building. In order to avoid hazards to human life and property, areas in excess of 30 percent slope shall have engineered plans for all construction and grading. These plans shall address roads, utility corridors, etc. as well as, off-site problems, such as erosion caused by construction.
- 1.2 Development of lands identified as having high inherent swelling capacity and severe load limitations should be allowed only after site specific soil analysis have been performed which indicate the soils can adequately support the structure.
- 1.3 The siting of residential, commercial, recreational, or industrial structures on or adjacent to known or potentially active fault zones should be avoided.
 - o Development on lands having soils sensitive to seismic activity should be permitted only after adequate site analysis and appropriate siting and design of structure and foundation.

In areas of known seismic hazard, building intensity should be dictated by a scale of acceptable risks as shown in Table V-7.

- 1.4 Development should not occur on existing unconsolidated landslide debris (refer to Figure V-7).
- 1.5 The County should update all soil related data and policies when current United States Soil Conservation Service study is completed. New information should be continually and immediately added to the technical background data base and if significant changes occur which would affect the Element, it should be revised.
- 1.6 The County should consider the creation of a Geotechnic Advisory Board comprised of representatives from recognized professional societies to assist in the periodic review of the Seismic Safety Element to assure the Element remains current with existing levels of knowledge. The Committee should include Engineering Geologists, Soil Engineers, and Design Civil Engi-

¹Policy in this section is only an update of the Lake County Seismic Safety Element adopted June 13, 1977. Related policy can be found in the Seismic Safety Element on p. 24-34.

neers. The Advisory Board will also act as an Appeal Board for special studies zones.

- 1.7 Encourage studies by the appropriate state and federal agencies on fault location, activity and seismicity within the County.
2. **To determine the relative seismic risk in various parts of the County as a guide to new development and hazard abatement of existing structures.**
 - 2.1 The County should continue to evaluate areas to determine the level of earthquake risk.
 - 2.2 The County should carefully monitor the relationship between geothermal resource development and seismic activity.
 - 2.3 The County should consider geologic and seismic criteria in its permitting authority and in determining land use policies and making decisions on development, particularly in identified study areas.
 - 2.4 The County should adopt development standards to insure adequate public health and safety upon delineation of Special Study Zones by state geologists as required by the Alquist-Priolo Act.
 - 2.5 All buildings for human habitation should be designed to compensate for seismic hazards and to meet the Uniform Building Code and other requirements based on risk, type of occupancy, and location.
 - 2.6 Anchoring of nonstructural elements that could cause damage, injury or loss of life during an earthquake should be encouraged.
 - 2.7 Public facilities should be upgraded to meet the risk requirements for seismic safety and be periodically reviewed to determine if and when upgrading is necessary.
 - 2.8 Existing buildings, particularly critical facilities, that do not meet requirements for seismic safety should be strengthened, abated, or downgraded in use in an orderly manner. Priorities for seismic upgrading or phasing out of existing seismically unsafe buildings should be based on hazard to life, occupancy, and the capability of the structure to resist anticipated earthquake effects.
 - 2.9 Request federal or state financial assistance to implement the corrective measures required.
3. **To insure that critical structures such as dams and hospitals, and other vital emergency facilities, are designed so as to remain functional after anticipated earthquake effects and to reduce the risk of life and property loss and interruption of essential services in the event of earthquake.**



Figure V-7 Geologic and Seismic Hazard Areas

LAKE COUNTY, CALIFORNIA

This map shows generalized data.
Detailed maps are on file with the
Lake County Planning Department.

0 10,000 20,000 feet

Sedway/Cooke



TABLE V-7

A SCALE OF ACCEPTABLE SEISMIC RISKS

LEVEL OF ACCEPTABLE RISK	REASON FOR RISK LEVEL	KINDS OF STRUCTURE
Extremely low	Failure of a single structure may affect substantial populations.	Structures whose continued functioning is critical, or whose failure might be catastrophic: nuclear reactors, large dams, power intertie systems, plants manufacturing or storing explosives or toxic materials.
Slightly higher than the above case	Failure of a single structure may affect substantial populations.	Structures whose use is critically needed after a disaster: important utility centers; hospitals, fire, police, and emergency communication facilities; fire stations; and certain bridges and overpasses that are part of a critical transportation element; also smaller dams.
Lowest possible risk to occupants of the structure	Failure of a single structure would affect primarily only the occupants.	Structures of high occupancy, or whose use after a disaster would be particularly convenient: schools, churches, theaters, large hotels, and other highrise buildings housing large numbers of people, other places normally attracting large concentrations of people, civic buildings, secondary utility structures, extremely large commercial enterprises, most roads, alternative or noncritical bridges and overpasses.
An "ordinary" level of risk to occupants of the structures	Resist minor earthquakes without damage; resist moderate earthquakes without structural damage, but with some non-structural damage; resist major earthquakes of the intensity of severity of the strongest experienced in California, without collapse, but with some structural as well as non-structural damage.	The vast majority of structures: most commercial and industrial buildings, small hotels and apartment buildings, and single-family residences.

Source: Meeting the Earthquake Challenge, Final Report to the Legislature, State of California, by the Joint Committee on Seismic Safety, January 1974. Part One: A Comprehensive Approach to Seismic Safety, p. 9.

- 3.1 Prohibit construction of critical facilities in areas subject to landsliding, liquefaction, quick clay effects, or seiche unless it can be conclusively demonstrated by site specific studies that the hazards can be mitigated and that the facilities will remain functioning after anticipated effects.
 - 3.2 Prohibit construction of critical facilities across the trace of known active or potentially active faults.
 - 3.3 Selected streets and highways vital to communication and the functioning of emergency services and critical facilities should be evaluated and upgraded to an acceptable degree of safety considering potential earthquake effects.
 - 3.4 Limit construction of critical transportation structures across the trace of a known active or potentially active fault to those which can not be reasonably constructed at another location.
 - 3.5 Require that critical facilities be designed and constructed to remain functioning after the Maximum Probable Earthquake and to resist collapse in the event of the Maximum Credible Earthquake as specified in a detailed Geologic/Seismic report based on a site specific investigation. Design utilities crossing fault zones to minimize damage by utilizing such measures as flexible units, valving, redundant lines, or automatic valves operated by differential pressure.
 - 3.6 Require emergency centers, such as hospitals, to have alternate independent drinking water systems, cooling water systems for electric generators and alternate generators for power.
 - 3.7 Conduct a structural review of all County critical facilities and include a detailed geologic/seismic site investigation and, if necessary, a review of access roads and utilities serving the sites. Require upgrading as determined by the reviews.
 - 3.8 Continue to meet seismic standards for dam safety as promulgated by the State Division of Safety of Dams as applicable to new and existing structures.
- 4. To insure that emergency communications remain functional after a major seismic disaster.**
- 4.1 Emergency plans dealing with disaster response should be maintained and revised as conditions warrant.
 - 4.2 The County should coordinate with all other local, state, and federal governmental agencies charged with disaster and emergency preparedness responsibilities.
 - 4.3 The public should be kept informed of what to do in the event of an earthquake disaster.

- 4.4 Property owners should be encouraged to take adequate steps to protect their property against the economic risks of seismic hazards.
- 4.5 The County should continue to conduct periodic emergency response exercises to insure that all County departments respond efficiently and that emergency communications and other systems are properly maintained. Continue to maintain emergency evacuation plans for identified potential flooding areas downstream of dams.
- 4.6 The County should develop interim disaster plans assuming many bridges and highway overpasses will not be functional following a major earthquake due to collapse and the roads and highways in hillside areas will be blocked by landslides.
- 4.7 The County should begin formulation of procedures to be followed in the event earthquake prediction becomes a reality, such as determining the agency from which predictions would be accepted (tentatively, the Governor).
- 4.8 The County should encourage the lending and insurance industries to advise fire and homeowner policy holders of insurance provisions related to earthquakes, floods, and mudslides.
- 5. **To facilitate post-disaster recovery and assure the sound and rational consideration of the area following a major disaster.**
 - 5.1 Following a major disaster, the County should be rebuilt in accordance with established general plan objectives and policies and appropriate County codes and ordinances.
- 6. **To encourage public awareness of potential earthquake hazards and protection measures.**
 - 6.1 Initiate an information program to educate the public to potential earthquake hazards, disaster preparedness, and procedures to follow during and after an earthquake.

FLOOD HAZARDS

Flood hazards in Lake County can be attributed to three sources: creeks, lakes, and dam failures. Those areas with the greatest potential for creek flooding are residential and agricultural areas along tributaries to Clear Lake and within the 100 year floodplain (see Figure V-8). The floodplain is most extensive along Scotts Creek, Cache Creek, Adobe Creek, Putah Creek, Cole Creek, and Kelsey Creek. A typical cross section for floodplain is depicted in Figure V-9.

TABLE V-8

GEOLOGIC AND SEISMIC HAZARDS IMPLEMENTATION

<u>POLICY</u>	<u>IMPLEMENTOR/ ACTIVATOR</u>	<u>ACTION</u>	<u>PHASING/TIMING</u>
<u>Geologic & Seismic</u>			
1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.5, 3.6, 3.8	Building Dept., Plan- ning Dept., Planning Commission, Board of Supervisors	Amend Building Code, implement Land Capa- city ordinances, adopt a geologic hazard overlay zone and continually update and adopt regula- tions as necessary when new information be- comes available.	Initial 18 months and then continuous
1.6, 2.2, 2.7, 2.8, 2.9, 3.3, 3.4, 3.7, 4.1, 4.2, 4.5, 4.6, 4.7, 5.1, 6.1	Planning Dept., Plan- ning Commission, Board of Supervisors, Building Dept., DPW, various agencies including Fire Dist., hospitals, sheriff, etc.	Self explanatory.	
1.7	Planning Commission, Board of Supervisors	Continue to work with state and federal agen- cies and provide access to County data.	Continuous
4.3, 4.4, 4.8	Planning Dept.	As implemented by Policy 6.1.	Continuous



Figure V-8 Flood Hazards

LAKE COUNTY, CALIFORNIA

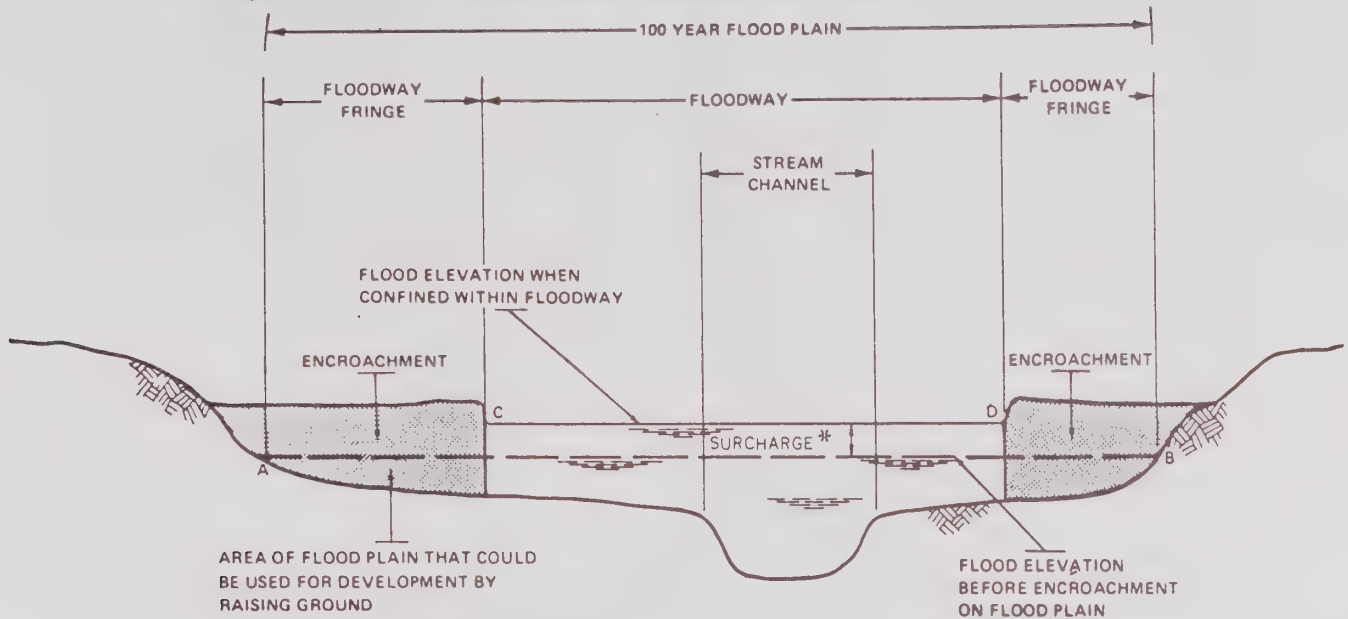
This map shows generalized data. Detailed maps are on file with the Lake County Planning Department.

0 10,000 20,000 feet

Sedway/Cooke

V-39

Figure V-9 FLOODPLAIN CROSS SECTION



Lake flooding poses a direct hazard to lands around Clear lake, Lake Pillsbury, Blue Lakes and Indian Valley Reservoir. The greatest damage can be expected around Clear Lake, since approximately forty of the lake's seventy-one mile rim are developed. The risk of human life is low because there is generally ample time to evacuate lakeshore residences if flooding is expected. Lake Pillsbury is an irregularly shaped lake, bounded by steep walls on all sides except for the northern lakeshore (gravelly valley). Flooding and wave run up (seiche) would inundate the entire rim of the lake, with Gravel Valley experiencing the greatest impact.

Five dams have been identified as being capable of causing death or injury if flooding due to dam failure occurs. These are Adobe Creek, Highland Creek, Indian Valley, Clear Lake, Hidden Valley, and Scott dams. Dam inundation can result from failure of its structural integrity or when spillway capacities are exceeded.

Objectives and Policies

1. To reduce the risk to life and property from flood hazards.

- 1.1 All development within the designated floodway zone shall conform with Department of Housing and Urban Development regulations and the Lake County Flood Plain Management Plan.
- 1.2 The 100 year floodplain zones (as designated on maps prepared by the U.S. Housing and Urban Development, Federal Insurance Administration) should be protected and maintained through strict limitation on land use. To carry out this policy the following guidelines on development should be observed:

TABLE V-9

FLOOD HAZARDS IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
<u>Flood Hazards</u>			
1.1	Building Permit Application	Required to conform with "P-F" or "S-F" zoning restrictions when applicable. Reviewed by Flood Control Officer for compliance with HUD standards and Flood Plain Management Ordinance.	Continuously
1.2	Specific project review, review of General Plan policies and zoning restrictions	Identification of Flood Plain and Hazard areas with appropriate zoning regulations Land Use	Upon completion of revised Zoning Ordinance
1.3	General Plan adoption, proposed zone changes	State guidelines require internal consistency between elements of General Plan. Zone changes must be consistent with principles and policies of General Plan.	Ongoing
1.4	Application for Development Permits	Discretionary permits which require CEQA review will be conditioned with mitigation measures. Flood Control Officer reviews non-discretionary permits for potential hazards, and requires appropriate development standards.	CEQA Initial Study review or building permit review
1.5	Subdivision Ordinance Development Requirements	Flood Control systems should be developed within new subdivisions consistent with prepared plans. Plans should be developed to include methods of implementing existing subdivisions or flood control projects.	Continuous


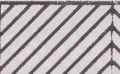
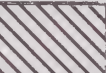






- o Critical facilities (those facilities which should be open and accessible during emergencies) should not be permitted.
 - o Passive recreational activities (those requiring non-intensive development, such as hiking, horseback riding, picnicking) are permissible.
 - o Commercial industrial and residential uses should not be permitted, unless all standards regarding elevation, anchoring, and floodproofing have been satisfied.
- 1.3 Flood control measures should be considered as part of an overall community development plan, and should advance the goals of recreation, resource conservation, preservation of natural riparian habitat, and scenic values of the County's streams, creeks, and lakes.
 - 1.4 Projects proposed within potential dam and seiche inundation zones should be reviewed by the Director of the County Office of Emergency Services and checked against evacuation plans on file for the area. If a project presents a direct threat to human life, appropriate mitigatory actions should be taken, including restriction of development in the subject area.
 - 1.5 The County shall encourage the development of multipurpose flood control projects when economically feasible.




FIRE HAZARD

Lake County is a high wildfire hazard area. The County's hilly topography, rich vegetation cover, and hot, dry season produce dangerous summer fire conditions. Wildfires are a potentially dangerous hazard to development located in forest and shrub areas. They not only destroy vegetation and endanger structures and public safety, but devastate valuable wildlife habitat and watershed lands. The absence of natural groundcover on burned lands greatly increases the hazards from slope failure, and erosion.

The severity of wildfire problems is influenced by four factors: vegetation, climate, slope, and people. The California Department of Forestry has developed a fire hazard severity scale which uses the first three of the above four factors to evaluate wildfire hazard (see Figure V-10). Using this scale, approximately 45% of the County falls into extreme fire hazard.

**Figure V-10
LAKE COUNTY
FIRE HAZARD SEVERITY SCALE**

FUEL LOADING	SLOPE %		
	0-40	41-60	61+
LIGHT Grass			
MEDIUM Scrub			
HEAVY Woods - Bushwood			

	MODERATE HAZARD
	HIGH HAZARD
	EXTREME HAZARD

The amount of wildland vegetation available as potential fuel for a fire is called fuel loading. The extent and severity of fuel loading is dependent upon the type and amount of vegetation in a particular area. Light fuels are considered to be flammable grasses and annual herbs, brush and shrubs less than six feet in height are considered to be medium fuels. Heavier brush and timber over six feet are considered to be heavy fuels. Roughly 45% of the County has a forest or woodland cover and nearly 40% is in hard chaparral.

Critical fire weather occurs in the County when air temperature rises to over 100 degrees Fahrenheit, relative humidity drops to near zero and hot, dry north or east wind blow at high velocities. Lake County has an average of more than 9.5 days of critical fire weather per year.

Development of residences on steep slopes or brush covered hillsides is an additional source of hazard. For example, development in hilly areas often necessitates narrow, twisting roads which do not provide adequate access for fire equipment. Several residential areas on Cobb Mountain experience such access problems. In addition, for each 20 percent increase in slope, the rate of spread for a fire will double.

People, or more appropriately human activities in areas sensitive to brush fires constitute the fourth factor contributing to the incidence of wildfire.

Objectives and Policies

Structural Fires

- 1. To reduce the risk to life and property from structural fires and establish minimum standards throughout populated areas of the County.**
 - 1.1 The County should support the improvement of fire protection services.
 - 1.2 All proposed development shall satisfy the structural fire protection and standards contained in most recent editions of the Uniform Building Code and Uniform Fire Code.
 - 1.3 All proposed development shall be adequately served by water supplies for fire protection and shall be designed and constructed to meet the Fire Protection Standards of Lake County.
 - 1.4 The County should encourage clustered developments to provide for more localized and effective fire protection measures such as consolidations of fuel buildup abatement, firebreak maintenance, fire fighting equipment access, and water service provision.
 - 1.5 Parks, golf courses, utility corridors, roads and greenbelts should be located so that they may serve a double function as fuel-breaks.
 - 1.6 Road networks shall be designed to provide for safe and ready access for emergency fire equipment and to allow alternate routes for excavations.
 - 1.7 The County should ensure that all streets, roads, and buildings are properly identified by name or number with signs which are non-combustible and are clearly visible from the main travelled roadway.

Wildland Fires

- 2. To reduce the risk of life, property, and areas from wildland fires.**
 - 2.1 The County should consult with the appropriate fire service district, in areas designated as high and extreme fire hazard, for particular regulations prior to issuance of a building permit.
 - 2.2 The County should consider fire hazards in evaluating development proposals. Within designated areas where population or residential building densities may be inappropriate to the hazards present, measures should be developed and adopted to mitigate risk to life and property loss.

TABLE V-10

FIRE HAZARD IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
<u>Fire Hazards</u>			
I. Structural Fires			
1.1	Fire Dists., Planning Dept., Planning Commission	Continue to mitigate impacts to fire protection agencies caused by development. Enforce Subdivision Regulations.	Continuous
1.2	Building Dept.	Enforce Uniform Building Code.	Continuous
1.3	Health Dept., Fire Dists., Building Dept., Planning Dept., Planning Commission	Enforce Uniform Building Code and Uniform Fire Code and Subdivision Regulations.	Continuously and/or upon completion of Zoning Code
1.4	Planning Dept., Planning Commission & Board of Supervisors	Implement Land Capacity Ordinance.	Upon completion of Zoning Code
1.5	Planning Dept., Planning Commission, Parks & Recreation	Implementation through Subdivision Regulations and "PD" process; emphasis on cluster housing.	Upon completion of Zoning Code
1.6	Fire Dists., Dept. of Public Works, Planning Dept., Planning Commission	Enforce Subdivision Regulations requiring proper road widths, adequate ingress and egress, and utilize master road plan to provide for ultimate road circulation.	Continuous
1.7	Dept. of Public Works, Fire Dists.	Maintain and enforce regulations requiring proper street, road and building identification.	Continuous

TABLE V-10 (continued)

FIRE HAZARD IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
2. Wildland Fires			
2.1	Building Dept., Fire Dists.	Establish procedure for Fire Dist. review of building permits for areas designated as high and extreme hazard.	18 months
2.2 2.3	Fire Dists., Building Dept., Planning Dept., Planning Commission	Continue to evaluate development with consideration for the hazards. Also implement Land Capacity Ordinance and cluster housing concept.	Continuous upon revision of Zoning Code
2.4	Fire Districts, Dept. of Public Works, Planning Dept., Planning Commission	Require property owners to maintain necessary firebreaks. Establish procedures for notification and enforcement.	18 months
2.5	Planning Dept., Planning Commission	Land Capacity Ordinance.	18 months
2.6	Fire Districts, Board of Supervisors	Self explanatory.	Continuous
2.7	Fire Districts, Board of Supervisors	Support Keene Bill.	Continuous

Lands designated as having high and extreme wildfire hazard may be developed provided that the following guidelines are satisfied:

- development should be limited to low density and rural residential only; cluster development encouraged.
 - developer and/or subsequent owners must assume responsibility for ongoing fire prevention maintenance activities for the project, including: abatement of fuel buildup, fire break maintenance, access provision, and provision of adequate water supply to meet fire flow.
 - separately developed dwellings with an individual private water supply shall provide an acceptable guaranteed minimum supply of water, in addition to the amount required for domestic needs.
- 2.2 The exterior of residential units should be composed of fire resistant materials and designed to reduce fire vulnerability.
- 2.3 Firebreaks of 30 ft. should be maintained around all structures. Additional fire breaks or fuel modifications up to 100 ft. around structures should be required when the fire officials find that extra hazardous conditions exist. Secondary fuelbreaks up to 200 ft. in width should be required when the fire authority finds that additional precautions are necessary. Fire buffers should be created along heavily traveled roads within high and extreme hazard areas by thinning, discing, or controlled burning.
- 2.4 Fire hazard criteria and performance standards shall be included in implementing policies of this section. (See Implementation Chapter, Land Capability/Capacity Policy)
- 2.5 The County should maintain a continuing cooperative fire protection agreement with the California Division of Forestry to provide added fire protection on a year round basis.
- 2.6 The County should actively support controlled burn programs on public and private lands throughout the County.

AIR QUALITY

One of Lake County's most valuable resources is its good air quality. There is an occasional violation of standards set by the State for total suspended particulates, but this occurs primarily in agricultural areas where dust due to plowing is common. Hydrogen sulfide standards have been violated in areas that surround geothermal developments, but again, this is a specific rather than general phenomenon. The remainder of the County is in attainment of the State air quality standards. Less significant sources of air quality degradation in the County include dust (suspended particles) due to construction activities, sand and gravel extraction, pesticide and fertilizer spraying, and vehicular exhaust fumes.

TABLE V-II

AIR QUALITY IMPLEMENTATION

<u>POLICY</u>	<u>IMPLEMENTOR/ ACTIVATOR</u>	<u>ACTION</u>	<u>PHASING/TIMING</u>
<u>Air Quality</u>			
1.1	Lake County Air Pollution Control District, Calif. Air Resources Board	Air quality monitoring and compliance are being implemented by the Air Pollution Control District and the Air Resources Board.	Continuously
1.2	Lake County Air Pollution Control District, Calif. Air Resources Board	Best available control technology is generally required by the Air Pollution Control District.	Continuously
1.3	Planning Department, Planning Commission, Board of Supervisors	Zoning revisions are required to promote residential development near employment and to allow local and community commercial operations to serve nearby residential areas. Implement County Bicycle Plan. Require equestrian trails and/or bike routes, ways or lanes where appropriate.	Upon completion of revision of zoning code
1.4	Planning Department, Planning Commission, Air Pollution Control District, Public Works Dept.	To reduce the dust impacts of new development on adjoining residences, paving or treatment of roads should be required in the use permit or air quality permit process. Existing roads may be resurfaced through capital improvement plans, redevelopment plans, special assessment districts or as part of existing County road maintenance activities.	Continuous

One of the primary air quality concerns in Lake County is the ability of the basin to tolerate a large loading of pollutants. The air basin is relatively small and is composed of a complex topography which makes dispersion of pollutants difficult under inversion conditions. (Inversion is an atmospheric condition where a layer of cool air is trapped by a layer of warm air so that the underlying cool air cannot rise. Inversions spread polluted air horizontally rather than vertically so that contaminating substances cannot be widely spread.)

Continued expansion of geothermal development in the County and subsequent hydrogen sulfide emissions represents a major threat to the County's air quality. (Refer to Geothermal Overview in the appendix for further discussion.) Strict monitoring and enforcement of hydrogen sulfide and other air pollution standards are required along with the use of advanced abatement technology. The Lake County Air Pollution Control District is primarily responsible for regulating stationary air pollution sources.

Objectives and Policies

I. To protect and preserve the County's air quality.

- 1.1 New and existing point sources of air pollution should be monitored for compliance with County, State, and Federal air quality regulations and standards.
- 1.2 The County should encourage the use of the best available air pollution control technologies to maintain healthful air quality and high visibility standards.
- 1.3 To reduce the number of vehicle trips and miles travelled, residential development should be in close proximity to places of shopping, play, and work. Opportunities for nonmotorized transportation should be encouraged to preserve the County's air quality and conserve energy as well.
- 1.4 As unpaved roads are a major source of the County's particulate emissions, the County should require that all new roads be paved or treated to reduce dust generation, unless waived by the appropriate review agency.

SCENIC HIGHWAYS

Residents and visitors, alike, recognize the extraordinary scenic beauty of Lake County's natural landscape. Mountains juxtaposed with lakes, numerous creeks flowing through valleys, orchards and vineyards spreading on flatlands or resting on hills. These views provide natural scenic amenities important to the quality of life in the County.

The enjoyment of these scenes depends largely upon the continued maintenance and further development of access to them. The County is fortu-

nate to have an established highway system which traverses areas of scenic and recreational interest. Highways with scenic view corridors provide for an enjoyable travel experience, link urban areas with open space areas, and provide access to recreational areas.

One method of preserving these resources is through the designation of scenic highways. The State Scenic Highway System was established in 1963. The system consists of officially designated state highways which are intended to be safe for fast moving traffic and equipped with turnouts, vista points and rest facilities. Roads can be designed as official scenic routes only after the California Department of Transportation performs a corridor study to identify the views and significant features along the route, and potential turnouts, vista points, etc.

Following the completion of this study, the County must prepare and adopt a program for the protection of the scenic corridor. ("Corridor" refers to the land area which can be seen from the road.) This program is to provide guidelines for the careful management and control of land use within the scenic Corridor. It is the state's responsibility to improve the roads, as necessary to meet scenic highway standards, while the County must provide adequate corridor protection. The intent is to create a network of scenic corridors which will orient the traveller and enhance both the foreground and distant views.

The California State Transportation plan lists the following segments of State Highways within Lake County as eligible for official Scenic Highway designations (for location of routes refer to Figure V-11).

- Highway 20 - the entire length through the County from Mendocino County line on west to Colusa County line on the east.

Highway 20 offers a diverse range of scenic views including mountain vistas near the Mendocino County line, agriculture lands in Bachelor Valley, and rolling hills on the eastern portion of the County. The route provides excellent lake views of both Blue Lakes and Clear Lake, as the road runs parallel to their shorelines.

- Highway 29 - from the intersection of Highway 20 at Upper Lake south to the Napa County line.

Highway 29 also provides scenic views of many of the County's diverse natural environments. Flatlands and rolling hills laced with orchards and vineyards are common views on the road segment between Lakeport and Lower Lake. The road offers an excellent view of Mt. Konocti. Open meadows and small valleys with a backdrop of rolling hills characterizes the scenic views of the highway from Napa County line to Lower Lake. It is an important scenic road connecting Lake County to regions south.

- Highway 53 - from the intersection with Highway 20 to the intersection with Highway 29 at Lower Lake.

Scattered views of Clear Lake with Mt. Konocti in the distance make the route scenically enjoyable.

In addition, to eligible State routes, several County roads have potential for designation as Scenic Highways include:

- High Valley Road between Bartlett Springs Road to Clear Lake Oaks, including the High Valley Road extension to Highway 20.

Hilly topography and scenic vistas to the south characterize this route.

- Lucerne cutoff - between Highway 29 and Highway 20.

Route links Lakeport with the communities on the north shore of Clear Lake. The road traverse Rodman Slough, one of the largest remaining wetlands areas important as a wildlife habitat.

- Butts Canyon Road, northeast of Middletown to Napa County line.

Butts Canyon Road connects the southeastern corner of Lake County with Highway 29. Hills and open valleys make route aesthetically pleasing.

- Scotts Valley Road from Highway 29 to Highway 20.

Scotts Valley Road links a major agricultural area with the City of Lakeport, Highway 29, and with Highway 20 to Ukiah.

- Elk Mountain Road from Upper Lake to Lake Pillsbury and the Mendocino County line.

This gravel road is the only route north into Medocino National Forest, a major recreation area. Elk Mountain Road also provides access to Lake Pillsbury.

- Bartlett Springs Road from Highway 20 to Colusa County line.

Bartlett Springs Road connects the grazing lands of the northeastern section of the County with north shore communities. This gravel road cuts into an area unspoiled by commercial areas and sprawling home-sites. The route, following a ridgeline in some segments, offers some spectacular views south to Clear Lake.

- Bottle Rock Road from Highway 29 to Cobb.

Bottle Rock Road extends from the edge of Big Valley agricultural region to Cobb Mountain and the geothermal development area. Primarily, running through mountainous topography, the route include dense woodlands and open meadows.

- Morgan Valley Road from Highway 53 in Lower Lake to Yolo County line.

This gravel road provides access from the natural grazing lands of the eastern central portion of the County to Highways 53 and 29.



- Big Canyon Road from Seigler Spring Canyon Road, Seigler Springs to Highway 175 at Middletown.

Big Canyon Road runs through a relatively unspoiled area providing scenic views of woodlands and open valleys.

- Soda Bay Road from Lakeview Boulevard to Highway 29 outside of Lower Lake.

Soda Bay Road is one of the County's most beautiful routes, running along the southern shoreline of Clear Lake. The route offers views of orchards and vineyards, as well as of the lake and Mt. Konocti. The road also offers access to Clear Lake State Park.

In order for these County roads to receive state approved designation as Scenic Highways, the County must be willing to provide the same level of protection as required for a state scenic highway and must request designation from the State Director of the Department of Transportation.

The intent of a scenic highways element is to eliminate unsightly conditions which may impair safe driving and be distracting to highway users. Further, it strives to create a favorable public image that will encourage economic development and tourism within the County, thereby protecting property values in areas through which the highways pass.

It must be considered, however, that although these highways should be promoted for a scenic highway classification, all areas along these highways are not equally "scenic". Physical constraints, public health and safety concerns and other hardships may make many areas inappropriate for a Scenic Corridor zoning overlay. Established urban densities, existing small lot sizes, etc. may necessitate a trade-off. Special sensitivity to these areas and conditions must be considered when designating "scenic corridors". This will ensure that this attempt at preservation of Lake County's natural scenic beauty will not conflict with the housing element's related policy: the provision of affordable housing in areas not subject to special design and infrastructure constraints.

Opportunities for picnickers, hikers, bicyclists and equestrians in much of the County are limited to the developed parks. Most of the scenic roadways have no existing public rest stops, picnic grounds and bike/equestrian trails associated with them.

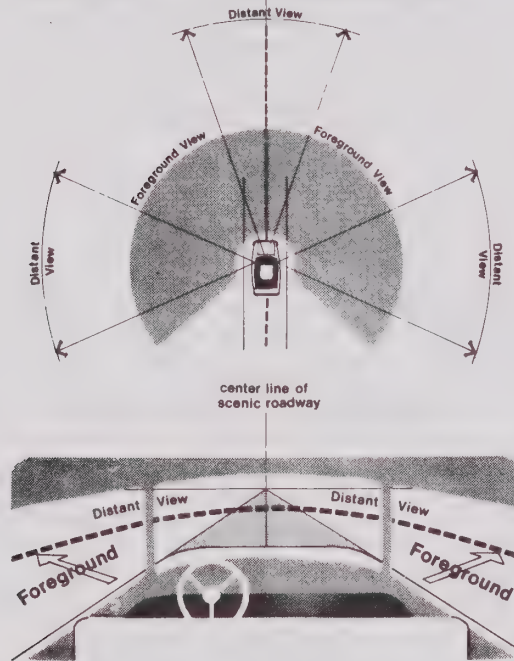
Objectives and Policies

- I. To protect and enhance the recreation based economy of the County through the maintenance and preservation of views of scenic areas from the County's roadways, both for the benefit of local residential and resort development and the motoring public.**

- 1.1 In the non-urbanized areas of the County (not designated urban residential) structures built within the immediate foreground view of a scenic roadway should reflect the following guidelines.

- Structures should be sited back from the roadway edge a sufficient distance to minimize intrusion upon the natural features and backdrops as viewed from the roadway or adjacent residences.
- Structures should be sited to minimize obstruction of views of significant natural features, such as Clear Lake and Mt. Konocti.

Figure V-12
COMPONENTS OF A ROADWAY VIEW



- 1.2 In the urbanized areas of the County (densities greater than three dwelling units per acre) structures within the immediate foreground of a scenic roadway should be constructed at a height and/or sited at a sufficient distance to maintain roadway and adjacent structures' views of distant, but visually significant natural features.
- 1.3 Signage intended to be seen from designated scenic corridors should meet the following guidelines:
 - Signs should be limited to the identification of the name and type of goods or services provided on the site on which the sign is located (i.e., billboards and other advertising of businesses, services, or products produced, sold or provided elsewhere would be prohibited except by special use permit).
 - Signs should be of a size, design, shape, material, and colors which make them subordinate to the sites and struc-

tures to which they relate and to the larger setting within which they will be viewed.

- Signs should be designed, sized, and sited so as to be easily read by motorist travelling at the posted speed.

- 1.4 The County should establish a coordinated Countywide roadway signage program which would provide within the public right-of-way identification of routes and major destinations; traffic information on speed, signalization, etc.; and identification and directional information for both public and commercial facilities serving the community and recreation visitors.
 - 1.5 Within the designated scenic corridors, roadway improvements should be constructed in a manner which minimizes roadway width and thus, reduces domination of the view by road surface; and conforms to the natural contours of the land and minimizes extensive grading and removal of roadside vegetation.
 - 1.6 Where possible curbside parking should be prohibited to minimize obstruction of and intrusion upon views from the roadway except at strategically located turn-outs.
 - 1.7 Commercial parking areas within scenic corridors may be necessary, but with proper design constraints they can provide attractive open areas which complement and expand scenic views. Special consideration should be given to these parking areas as to their physical location, layout, and landscaping in an effort to make them an asset in the preservation of scenic corridor values.
 - 1.8 Landscaping should be employed to screen from views lands or structures which detract from the view and help frame and direct attention to major views. Additionally, selective cutting and pruning should be permitted to enable establishment or improvement of roadway views.
2. **To provide residents and visitors with opportunities to experience the County's scenic setting as motorists, bicyclists, hikers, and equestrians.**
 - 2.1 Hiking, bicycling and equestrian trails should be developed along scenic roads where they can be safely provided without adversely increasing public health and safety needs.
 - 2.2 Turnouts should be provided where there are major views of specific features, such as Clearlake, or panoramic views of the countryside. Interpretative information should be provided at these points to help inform visitors and residents of the natural and cultural history of the County.

TABLE V-12

SCENIC HIGHWAYS IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PROGRAM FINANCING	PHASING/TIMING
<u>Scenic Preservation</u>				
1.1	Planning Commission, Planning Dept.	Establish precise areas in County which have scenic values, eliminating lots or areas not suitable for scenic corridor designation because of dimensions, location, etc. Implement revised scenic corridor zoning overlay.	County general fund	Immediately upon adoption of a revised scenic corridor ordinance
1.2	Planning Commission, Planning Dept.	Create review procedures for construction within Scenic Corridors.	County general fund	Immediately upon adoption of General Plan
1.3	Planning Commission, Planning Dept.	Adopt design criteria for signs. Establish procedures for ministerial review by Staff, except for signs requiring use permit which will be reviewed by Planning Commission.	County general fund	Immediately upon adoption of General Plan
1.4	Planning Commission, Board of Supervisors, Planning Dept., Dept. of Public Works	Determine strategic locations through study and consultation (Chamber of Commerce, Cal-Trans, citizen input, etc.) for informational signs. Organize volunteer aid in design and implementation.	County general fund, State Highway Beautification Fund, federal revenue sharing, volunteer aid	Within 2 years
1.5	Board of Supervisors	Direct Department of Public Works to establish procedures for road design review. Work with CalTrans prior to state highway improvements on design alternatives.	County general fund, Capital improvements fund	Within 1 year

TABLE V-12

SCENIC HIGHWAYS IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PROGRAM FINANCING	PHASING/TIMING
1.6	Board of Supervisors	Review and revise Lake County Transportation Code (Chapter 19) to limit or restrict curbside parking where appropriate. Work with CalTrans to provide turnouts and rest stops at strategic vista points.	County general fund, State highway fund	Within 1 year
1.7	Planning Commission, Planning Department, Dept. of Public Works	Revise scenic corridor zoning regulations to include parking lot design criteria. Establish review procedures.	County general fund	Immediately upon adoption of the General Plan
1.8	Planning Commission	Establish scenic corridor landscaping requirements where appropriate. Work with CalTrans on landscape beautification program.	County general fund, State Highway Beauti- fication Fund	Within 1 year
<u>Scenic Enjoyment</u>				
2.1	Board of Supervisors, Dept. of Public Works	Lobby with state legislators and CalTrans for quick implementation of adopted County Bicycle Plan. Establish program to study feasibility of widening shoulders of County roads. Paint or remark "fog lines" where appropriate.	County general fund, Capital Improvements Fund	Within 1 year
2.2	Planning Commission, Board of Supervisors, Planning Dept., Dept. of Public Works	As implemented by policies 1.4 & 1.6	County general fund & Capital Improvements Fund; volunteer aid	Within 2 years

CLEAR LAKE

Clear Lake is the County's single most valuable natural resource, important for both its economic and aesthetic values. Its use and development will greatly influence the development of the entire County. Wise management and protection of the lake and shoreline is needed to ensure that its value will be sustained and its full economic potential reached for the current and future generations of the County.

Ironically, the lakeshore, by its appeal, generates many of the forces which threaten its value. Fragile ecological systems exist in the lake and around its shore which cannot tolerate intensive, human use. Specifically, development near and around the shoreline of the lake have had a significant impact on the water quality and has destroyed valuable wetland areas. (See Figure V-15 for existing land uses around the lakeshore.)

Lakeshore development, historically, has been the result of a complex set of public and private decisions made in an uncoordinated and piecemeal manner. In several cases, public uses and uses which provide a significant public benefit have lost out to private development (e.g., wetland areas). Moreover, many hidden "costs" of development are passed onto the public, including environmental degradation and pollution.

The value of Clear Lake to Lake County is best determined by the functions it serves. The lake provides outstanding recreational opportunities, supporting the County's recreation/tourist industry. The lake is also an important source of water, both domestic and irrigation uses, for Lake County and neighboring Yolo County. The lake and its shoreline support important fish and wildlife habitat necessary for the spawning, feeding, and protection of fish and other wildlife. Since fishing constitutes the primary recreational use of the lake, these habitat areas are also significant to the recreational function of the lake. The lake's natural scenic beauty also brings pleasure and enjoyment to all within its view.

Enjoyment of the recreational, aesthetic, and economic values of Clear Lake is greatly influenced by the lake's environmental quality and public access. Currently, the two most significant water quality problems are nuisance algae growth and high sedimentation yield. These two problems are largely due to natural conditions of the lake. The algae are primarily a result of the lake's high nutrient load and the sedimentation a result of the naturally high erosion factor of the Clear Lake Basin. The effects that urban, agricultural, and recreational development have had and will continue to have on the lake are not entirely understood. Development of land, as well as use of water within the watershed has affected the siltation, nutrient intake, circulation, and turbidity levels of the lake. With naturally high nutrient and erosion levels, all man-made factors contributing to water quality problems should be kept at a minimum.

The quantity and quality of the lake's natural habitat areas also affects the environmental quality of Clear Lake. The habitat areas, including wetlands and riparian lands, support a diverse and abundant variety of fish and wildlife (see Figure V-12). These areas have been greatly altered from their pristine state by commercial, residential, and agricultural development.

The loss of wetlands around Clear Lake has been piecemeal, but the cumulative effects of this development has been a net loss of 72 percent of the wetlands area between 1952 and 1977. Without these habitat areas, both the quantity and diversity of the lake's fish and wildlife will suffer. Preservation of all remaining wetlands areas is important, in particular, three areas are of special significance, largely due to their size and quality of habitat. These areas include Anderson Marsh, Rodman Slough, and the area south of Lakeport and west of Clear Lake State Park.

Adequate public access to Clear Lake and its shoreline is also a necessary ingredient to the lake's enjoyment. Access is currently provided by ten public recreational facilities with boat ramps, picnic areas, swimming areas, etc; public lands that are currently undeveloped; private resort areas and clubhouses which provide access to their guests/customers; and private property which has, over the years allowed public access. Figure IV-16 shows all public recreation areas with lake access. In Lake County access is sometimes provided in those areas where streets dead-end into the lake.

Objectives and Policies

- I. To manage and preserve fish and wildlife habitat areas, environmentally sensitive areas, and areas of natural scenic beauty around Clear Lake.**
 - 1.1 The County should ensure the preservation and enhancement of the diverse fish and wildlife, and aquatic habitats of the lake.
 - 1.2 The development or alteration of a Clear Lake shoreline site with identified fish and wildlife habitat (as shown on Figure V-13) should give consideration to the protection of the habitat. Development should be permitted only after a site specific investigation to define the extent and fragility of the habitat, and mitigation measures proposed to any impacts to the habitat stemming from the site's development. (However, this study may be waived if other studies have been conducted in the vicinity revealing no impacts on the area or if it has been otherwise determined that the project would not result in adverse impacts). To avoid unnecessary costs and duplication the site investigation should meet the requirements of the California Environmental Quality Act.
 - 1.3 Opportunities to use natural or managed floodplains should be promoted to provide habitat for waterfowl and other wildlife.
 - 1.4 The County should coordinate and support efforts for the public acquisition of environmentally significant lands.
 - 1.5 Agricultural lands adjacent to the wetlands of the shoreline above the high water mark, 7.56 Rumsey, should be retained in agricultural operation (see Figure V-13).

2. To protect and enhance the water quality of Clear Lake.

- 2.1 The County should ensure that development around Clear Lake and along major tributaries occurs in a manner which minimizes the potential impact of land disturbance and erosion on the water quality of the lake.
- 2.2 The discharge of potential water pollution from septic tank systems, wastewater disposal facilities, agricultural activities, industries using toxic chemicals, junk yards and other potential polluting sources, into Clear Lake should be avoided.
- 2.3 The County should coordinate and support efforts needed to control Clear Lake environmental problems, including nuisance algae and Clear Lake gnat.
- 2.4 Public agencies having management responsibilities for Clear Lake should promote and pursue methods to enhance fish and wildlife habitats, and water quality in areas within their jurisdiction, and cooperate with other agencies and private property owners to those ends.

3. To maximize the opportunity for human enjoyment of Clear Lake resources, ensure frequent and easy public access to the lake, and enhance the recreation-based economy of the County.

- 3.1 Vacant County-owned lakefront properties not presently developed for recreation purposes should be retained in public ownership and improved as needed to expand opportunities for the general public to have access and use of Clear Lake. Consideration should be given to land swaps with private property owners which would enable consolidation of County properties into more useable parcels or relocate the public uses to more appropriate locations.
- 3.2 All vacant lands owned by other public agencies should be retained in public ownership and steps taken to improve these sites for public lake access and water-related uses. Any public lands declared surplus by other public agencies should be acquired by the County and retained for public shoreline use.
- 3.3. Public streets which dead-end at the lake should be used for public access and open space.
- 3.4 Recreation uses and facilities should be permitted on lakefront lands designated as rural land in the Land Use Plan (Figure V-7). The type and size of these uses and facilities should be determined based upon consideration of topography and geologic factors which determine the extent of buildable land; ability to provide adequate vehicular access; and visual compatibility with the lake and lake setting.
- 3.5 The County should promote water related land uses and facilities on vacant or redeveloped lakefront lands designated for suburban

LAKE COUNTY, CALIFORNIA

Sedway/Cooke

-
- WETLANDS PROTECTED**
- AGRICULTURAL LANDS PRESERVED**
- RECREATION USES AND FACILITIES PERMITTED**
- WATER RELATED USES REQUIRED FOR SHORELINE PROPERTIES**

or urban residential uses. Water related uses and facilities are defined as those whose primary purpose is to provide for public access and use of the lake (e.g., fishing, boating, swimming, water skiing, viewing) or commercial uses which derive major economic benefits from their immediate proximity to the lake.

- 3.6 Consideration should be given to the location of and types of facilities provided by existing lakefront recreation areas when developing new public access areas, so that a coordinated and integrated Clear Lake recreation network may result.
- 3.7 The County should require commercial signage which contributes to, rather than distracts from, the scenic value of the area; promotes public safety; and improves the identification of public serving commercial facilities along the lakeshore of Clear Lake.
- 3.8 Development regulations and review procedures should prevent further blockage of lake views from shoreline roadways and where feasible, restore visual contact with the lake from these roadways.
- 3.9 The County should encourage every available means for providing public education regarding the value of shoreline preservation and the shoreline as an educational laboratory.
- 3.10 The County budgeting process should prioritize programs for improvement and maintenance of public lakefront lands and seek new sources of financing to help maximize the recreation, aesthetic, and economic benefits derived from public view, access, and use of the lakefront.
- 3.11 The County should permit limited alteration of the shoreline to facilitate improved public access and use.

GEOHERMAL RESOURCES

The energy captured from the earth's heat is a relatively clean, efficient source of fuel. A large portion of Lake County overlies a major geothermal resource area, the Geysers-Calistoga Known Geothermal Resource Area (KGRA). Since 1960 when the first geothermal power plant began operating in Geysers-Calistoga KGRA (Known Geothermal Resources Area), Lake County has experienced increasing demand for its geothermal resources. Currently, the County has one geothermal power plant in operation, one under construction, and at least 4 proposed for construction. This represents a substantial commitment to the development of the County's geothermal resources. Most land in the KGRA is leased for geothermal development. As of September, 1981, 156 geothermal wells had active permits in Lake County from the local Air Pollution Control District.

Geothermal development in the County has generated varying degrees of support and resistance from the public. Support for geothermal development stems from the potential benefits from local geothermal

TABLE V-13

CLEAR LAKE IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
<u>Clear Lake</u>			
1.1	Planning Dept., Planning Commission, Board of Supervisors, Dept. of Fish & Game, Army Corps of Engineers, Lakebed Management	Enact Resource Conservation overlay zones in critical habitat areas and implement buffer, setback development plans or clustering requirements. Continue Lakebed Management permitting procedures for lakeshore improvements. Early consultation and cooperation with Fish & Game, Army Corps of Engineers, and other agencies. Review (and revise if necessary) CEQA procedures.	18 months and then continuously
1.2	Planning Dept., Planning Commission, Board of Supervisors	Review (and revise if necessary) CEQA procedures.	18 months and then continuously
1.3	Same as 1.1, plus Flood Control and Water Conservation District	Zoning revisions, implementation of Flood Control overlay designations, and cluster policy. Cooperation with state and federal agencies.	18 months and then continuously

TABLE V-13 (continued)

CLEAR LAKE IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
1.4	Same as 1.1, plus Flood Control and Water Conservation District	Self explanatory.	Continuously
1.5	Same as 1.2	Low intensity agricultural zoning.	Upon completion of revised Zoning Ordinance
2.1	Planning Dept., Planning Commission, Board of Supervisors, Army Corps of Engineers, Lakebed Management, Public Works Dept.	Implement setback and buffer requirements, flood control hazard designations, grading, Building & Lakebed Management permits, Resource Conservation overlay zones.	18 months
2.2	Regional Water Quality Control Board, Health Dept., Special Dist., Planning Dept., Planning Commission, Board of Supervisors	Expand lakeshore sewer system; deny development requests and building permits based on percolation and drainage considerations; zoning revisions.	Continuously

TABLE V-13 (continued)

CLEAR LAKE IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
2.3	Health Dept., Mosquito Abatement	Self explanatory.	Continuous
2.4	Same as 1.1	Same as 1.1	Continuous
3.1	Public Works, Planning Dept., Planning Commission, Board of Supervisors, Lakebed Management	County should identify and prioritize suitable lakefront properties for improved access and recreational opportunities.	2 years
3.2	Public Works, Planning Commission, Planning Department, Board of Supervisors, Lakebed Management, appropriate state and federal agencies	Self explanatory.	Continuous
3.3	DPW, Lakebed Management, Planning Dept., Planning Commission, Board of Supervisors	Self explanatory.	Continuous

TABLE V-13 (continued)

CLEAR LAKE IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
3.4	Public Works Dept., Lakebed Management, Planning Dept., Planning Commission, Board of Supervisors	Enact land capacity ordinance, zoning revisions, scenic corridor provisions.	18 months
3.5	Planning Dept., Plan- ning Commission, Board of Supervisors	Zoning revision.	18 months
3.6	Lakebed Management, Planning Commission, Board of Supervisors, Planning Dept., Public Works Dept.	Capital Improvement plans.	Continuous
3.7	Planning Dept., Plan- ning Commission, Board of Supervisors	Implement and revise if necessary sign ordi- nance and zoning, scenic corridor revisions.	18 months
3.8	Planning Dept., Plan- ning Commission, Board of Supervisors	Scenic corridor, zoning revisions.	18 months

TABLE V-13 (continued)

CLEAR LAKE IMPLEMENTATION

POLICY	IMPLEMENTOR/ ACTIVATOR	ACTION	PHASING/TIMING
3.9	Planning Dept., Public Works Dept., Lakebed Management, Dept. of Fish & Game, State Parks Dept., Board of Education, etc.	Self explanatory.	Continuous
3.10	Lakebed Management, County Depts., Planning Commission, Board of Supervisors	Self explanatory.	Continuous
3.11	Lakebed Management, Public Works Dept.	Lakebed Management permitting from Capital Improvement Plans.	Continuous

contributions to an improved regional energy supply. Projections for the Geysers-Calistoga KGRA range from an electrical energy capacity as high as 2,000 megawatts (MW) to 2,400 MW by 1990. Increased employment opportunities, diversification of the County's economic base, and an improved tax base are considered the major benefits of local development. Generally, local resistance largely stems from potentially adverse environmental impacts associated with geothermal development activities.

Lake County "Conditions, Procedures, and Performance Standards for Geothermal Regulation" have been in effect since 1972. Use permits required for all geothermal well drilling and site construction contain conditions designed to minimize impacts to each specific site. In 1978, a revision of the County's "Conditions, Procedures, and Performance Standards for Geothermal Regulation" was initiated but not completed. Upon completion, these revised standards should be used for implementation of the General Plan.

The purpose of this geothermal element is to provide a plan of action to guide geothermal development. The provisions contained in this element have been developed to help attain maximum benefits and minimum impacts from the use of the County's geothermal resources. In addition, with an adopted geothermal element and adequate procedures for processing geothermal projects, the Division of Oil and Gas may delegate its authority as lead agency for exploratory well permits to Lake County (Public Resources Code Section 25133). The California Energy Commission may also, upon petition of the County, and demonstration of an equivalent certification process, delegate its authority to the County for siting geothermal power plants over 50 megawatts. However, it should be noted that the geothermal element was not written for the purpose of qualifying the County for these increased geothermal regulatory responsibilities at this time.

To date, geothermal development in the County has primarily occurred in the Mayacmas Mountains, near the Sonoma County boundary. This area produces almost pure steam which is either dry and super-heated or vapor dominated. Figure V-14 shows the County's proven vapor dominated reservoir. However, this dry steam reservoir is anticipated to extend outward from the proven field (although the actual magnitude of the field is undetermined), and it is expected that further geothermal development will follow. Temperatures of the geothermal resource in this reservoir have been in the range of 350°-475°F. Outside of this steam-bearing zone is a large area extending northeasterly which is more likely to contain liquid dominated resources.

Most of the lands in the southeastern portion of the County which are likely to have potential geothermal resources have been leased to prospective developers. In Lake County, property owners include the federal government, state government and private interests. The Bureau of Land Management reports approximately 7,500 acres under lease in the County. The State Lands Commission has leased approximately 1,000 acres and issued geothermal prospecting permits for 1,800 acres in Boggs Mountain State Forest. The Commission is currently proposing to lease an additional 1,480 acres, most of which is located in Lake County. Current information is not readily available regarding which private lands are leased.

Electric power generation has been and will continue to be the dominant product of the geothermal resources in Lake County. This is primarily attributed to the high quality of the County's steam resource. There are currently 15 electrical generating power plants in the Geysers-Calistoga KGRA. One of the plants, PG&E's Unit 13, is located in Lake County. The plant produces 135 MW of electricity and utilizes 2,455,000 pounds of steam per hour when operating at full capacity. Another power plant, the Department of Water Resources' Bottle Rock Plant, is under construction near Cobb Valley. Numerous other electrical power generating entities are proposing power plants in Lake County (see Table V-14).

TABLE V-14

LAKE COUNTY GEOTHERMAL POWER PLANTS ACTIVITY

<u>Utility</u>	<u>Net Megawatts</u>	<u>Operation Date</u>	<u>Status</u>
PG&E Unit 13	135	1980	on-line
Department of Water Resources			
Bottle Rock	55	1984	under construction
PG&E Unit 16	110	1983	AFC*
Occidental #1	80	1984	AFC*
Northern California Power			
Authority #1	66	1985	AFC*
DWR New Field	55		planned

*AFC - Application for Certification pending before California Energy Commission.

In addition to generating electricity, geothermal resources can be used directly to provide heat for a variety of agricultural, commercial, and residential applications. While direct heat applications have not been included in any large scale development plans in the County, interest in direct application is growing, largely due to increasing energy costs combined with the development of technologies which make direct use operations more cost effective. If developed, direct use applications could produce important local employment benefits and provide a most efficient use of geothermal energy. Direct use operations showing promise for application in Lake County include the following: space heating and cooling for homes and business; agribusiness operations such as greenhouse operations of vegetables and cut flowers, algae growing, harvesting and processing, mushroom growing, aquaculture (fish farming), livestock and poultry feed production, soil warming and frost protection, refrigeration, hay drying, vegetable and fruit canning and freeze drying; commercial operations such as dehydration, cryogenic, pharmaceutical and specialized food processing; and recreation uses such as hot springs and mineral baths. Geothermal heat can also be used in processing natural resources such as timber drying, ethanol and bio-gas production.

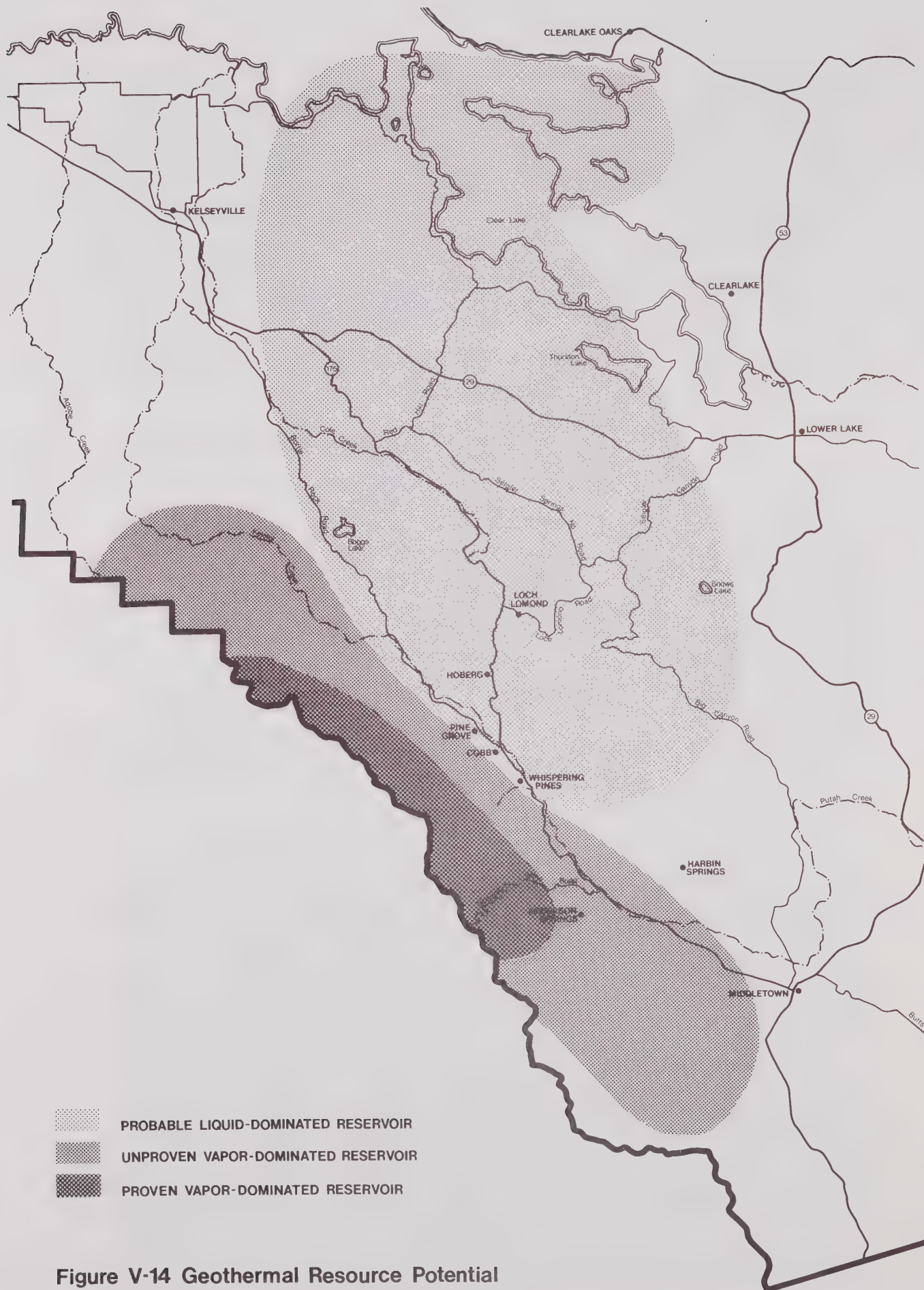


Figure V-14 Geothermal Resource Potential

LAKE COUNTY, CALIFORNIA

This map shows generalized data

0 1 2 miles

Sedway/Cooke

V-70

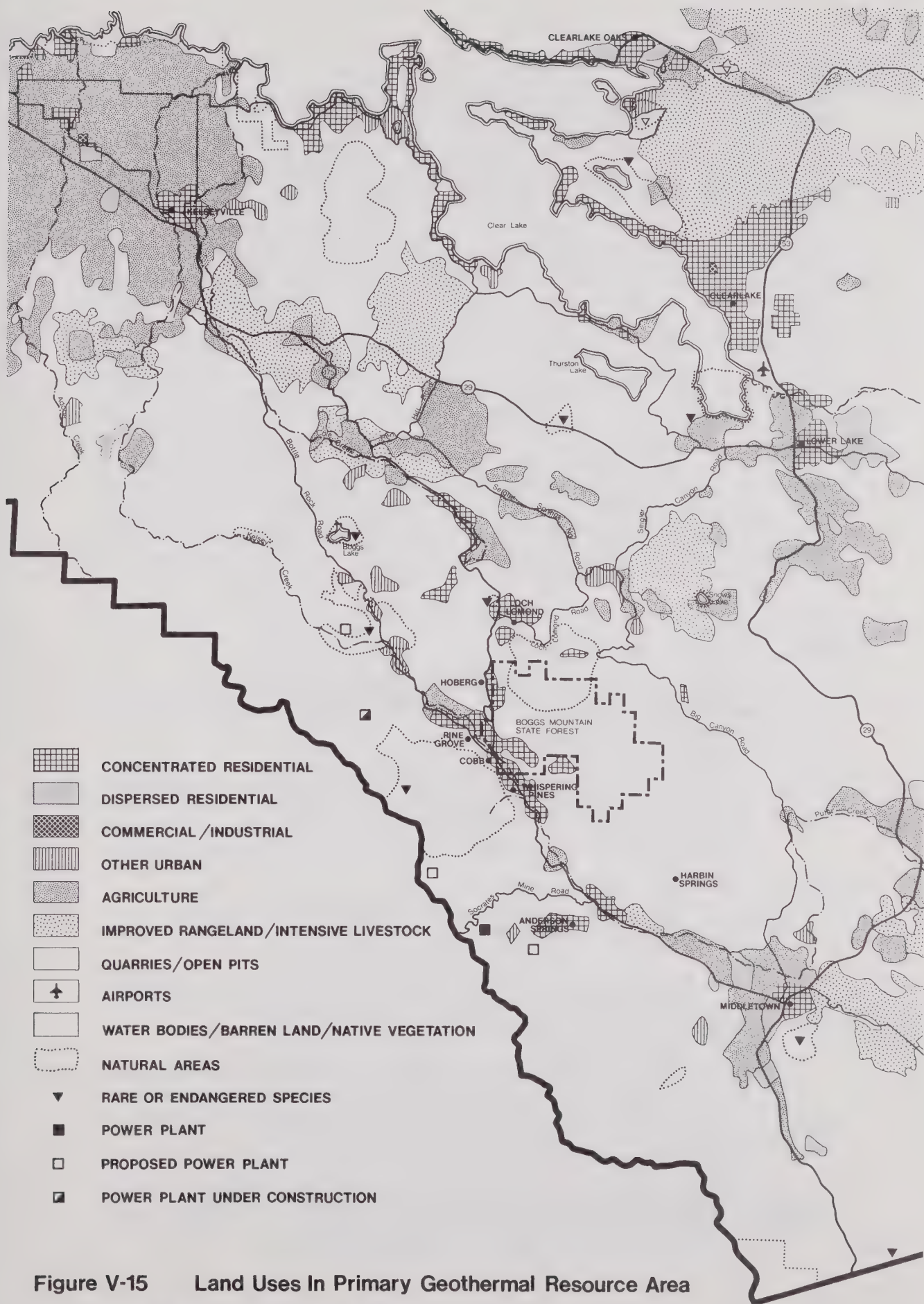


Figure V-15 Land Uses in Primary Geothermal Resource Area

LAKE COUNTY, CALIFORNIA

This map shows generalized data

0 1 2 miles

Sedway/Cooke



The ability to obtain greater revenues from steam development for power generation than from direct application is a principal factor contributing to the low interest in direct applications. Accessibility problems throughout the geothermal resource area and the County, in general, have also proven to be strong disincentives to industrial operations which could utilize the resource.

The implications of developing the County's geothermal resources will be particularly significant for not only those communities and residents who are located within close proximity to the primary geothermal development area, but also the entire County. Already the communities located in the Cobb Mountain area, including Anderson Springs, Whispering Pines, Cobb, Pine Grove, Hoberg and Loch Lomond, are witnessing a change in the character of their communities as a result of existing geothermal development (see Figure V-15). The cumulative effect of geothermal development potentially could be great. While it is likely that these effects will help to stimulate the local economy, geothermal development may also result in unintended changes to the scenic/recreational character of the area. A variety of environmental and land use implications must be considered when planning for geothermal development. These considerations are addressed in the following Objectives and Policies, and discussed in greater detail in the Geothermal Resource Overview located in the Appendix.

Objectives and Policies

- 1. To promote and manage geothermal development which will maintain and enhance the County's environment and quality of life and provide an alternative energy supply.**
 - 1.1 The County should promote the development of geothermal resources, provided that such use allows maximum protection to the resource and the environment, protects public health and safety, and is compatible with the current and projected uses of the land.
 - 1.2 The County should encourage compatible, comprehensive, multi-use activities in geothermal production areas.
 - 1.3 The County should encourage the development of all geothermal resources capable of measurably improving the local economic base, consistent with its environmental protection policies.
 - 1.4 The County should determine costs of processing permits, monitoring, and enforcement of geothermal development; and pass these costs on to development companies through an appropriate fee.
- 2. To protect Lake County's natural environment and public health and safety through the management and mitigation of environmental impacts associated with geothermal development.**

- 2.1 Geothermal development should be conditionally permitted in all land uses based upon performance standards which seek to minimize environmental impacts and to ensure compatibility with surrounding land uses.
- 2.2 The County should review all existing local regulations and standards for geothermal development activities and revise where necessary to insure adequate protection of public health and safety. Performance standards for all phases of geothermal development should address, but not be limited to, the following concerns:
- Land Use - Appropriate mitigation measures are in part determined by the surrounding land use. Consequently, performance standards should consider varying land uses including agricultural, residential, resort, and other uses.
 - Natural Habitat/Vegetative Protection - The County should require a comprehensive and well-maintained program of revegetation after grading activities have occurred, as well as after abandonment of any geothermal facilities. The cost of all facets of the revegetation program should be borne by the resource developers.
 - Soil and Slope Stability (Including Subsidence) - Concerns regarding soil erosion and geologic hazards require site specific topographical and geological information and the use of appropriate design features pertaining to grading, cut and fill slopes, compaction, drainage, and other factors.
 - Surface and Groundwater Degradation - Adequate buffer zones along streams, spill protection measures, sump construction, drainage systems, water quality monitoring, and other considerations, should be taken into account to protect water resources.
 - Seismicity - Appropriate geologic studies and seismic monitoring should be encouraged to further investigate the relationship of geothermal activities to the frequency and intensity of seismic events.
 - Air Quality/Noise - The County should promote use of the best available air pollution and noise abatement techniques, as well as encourage the development of new technologies, to further reduce air quality and noise impacts.
 - Visual Quality - Geothermal development in visually sensitive areas should be encouraged to apply measures which would reduce the visual impact of the development.
 - Cultural and Archaeological Resources - Cultural and archaeological resources should be identified and adequate mitigation measures enacted where appropriate.

- **Environmentally Sensitive Areas** - The County should assure the preservation and protection of riparian corridors, wetlands and other environmentally sensitive lands (refer to Figure V-4, V-5, and V-6) in areas of geothermal development.
- **Road Access/Traffic** - The road system serving geothermal development areas should be upgraded and maintained to reduce traffic hazards, improve circulation and other road conditions. There may be specific projects where the cost of necessary road improvements should be passed on to developers as part of the project's mitigation measures.
- **Well and Plant Abandonment** - Upon completion of geothermal activities, wells shall be abandoned in accordance with local and state regulations.
- **Agriculture** - Potential expansion of geothermal activities into predominately agricultural areas raises issues pertaining to possible competition for water, subsidence and the impact of geothermal emissions on plant growth. Consequently, additional performance standards and monitoring may be appropriate in agricultural areas.
- **Geothermal Waste Disposal** - Performance standards should address those measures needed to insure that geothermal wastes are disposed of in a safe and acceptable manner.
- **Fire Protection** - Wildfire contingency plans should be considered for all geothermal development occurring in a higher extreme wildfire hazard area.
- **Electrical Transmission Lines** - Electrical transmission corridor routes should be carefully selected, and transmission line corridors which accommodate the anticipated capacity of the Geyser's operations should be established to deliver electricity to major distribution points.
- **Public Safety** - Evacuation plans accounting for possible emergency situations with geothermal exploration, development, and operation, for geothermal workers and proximate areas of human habitation should be prepared, implemented, and maintained by the developer in cooperation with public agencies.

3. To encourage and promote the development of direct use applications.

- 3.1 The County should promote the utilization of direct heat applications, including space heating and cooling for homes and businesses, sewage and solid waste disposal, and water supply treatment facility.
- 3.2 The County should promote the development of direct use applications through pursuit of government and private grant

sources. One possible use of these funds would be for the development of a geothermal direct use demonstration-educational center and office.

- 3.3 The County should encourage direct use applications through appropriate zoning, land use flexibility, and incentives.

TABLE V-15

GEOTHERMAL IMPLEMENTATION

<u>POLICY</u>	<u>IMPLEMENTOR/ ACTIVATOR</u>	<u>ACTION</u>	<u>PHASING/TIMING</u>
<u>Geothermal Resources</u>			
1.1, 1.2, 1.3	Planning Dept., Planning Commission, Board of Supervisors	Revise County Geothermal Performance Standards. Review permitting procedures for each stage of development. Require bonding requirements when necessary to insure adequate site restoration. Maintain up-to-date map of geothermal projects for public information purposes. Zoning revisions to prevent or reduce future land use conflicts on lands surrounding existing geothermal development projects.	1.1 - 1 year
1.4	Planning Dept., Planning Commission, Board of Supervisors	Self-explanatory	Immediately
2.1, 2.2	Planning Dept.	Self-explanatory.	2.1 - Continuous 2.2 - 1 year
3.1	Planning Dept., Planning Commission, Board of Supervisors, Special Districts	Grant funding should be sought for feasibility studies and/or demonstration projects. Planning, Public Works Dept. and other County staff should provide technical assistance where possible.	Continuous
3.2, 3.3	Planning Department, Public Works Dept., Planning Commission, Board of Supervisors	Self-explanatory.	Continuous

VI. IMPLEMENTATION



The County's General Plan is a formal expression of the community's goals and policies for the development of the County. However, the Plan does not have regulatory effect. In other words, the Plan recommends certain policies to be followed, but the Plan itself cannot require that these policies be carried out. The Plan must be implemented through a number of actions or measures.

The implementation discussion is organized in the following fashion:¹

- Regulation
- Review Procedures
- Housing Program
- Open Space Action Program
- Financing Program

REGULATION

The authority of cities and counties to regulate land use and development practices is founded in the state delegated "police power." Through these powers local governments can take action to promote the public's health, safety, and general welfare.

Zoning and Subdivision Consistency

California Government Code Section 65860 requires that, "a county or city zoning ordinance shall be consistent with the General Plan of the county or city by January 1, 1974. A zoning ordinance shall be consistent with a city or county General Plan only if: (1) the city or county has officially adopted such a plan, and (2) the various land uses authorized by the ordinance are compatible with the objectives, policies, general land uses and programs specified in such a plan." In a related action, the legislature amended the state Subdivision Map Act, requiring that tentative and final maps not be approved unless the design and improvement were found to be consistent with applicable Specific and General Plans. (Govt. Code Sec. 66473.5)

A further subsection states that in the event a zoning ordinance becomes inconsistent with the General Plan by reason of an amendment of such plan, or to any element of such plan, the zoning ordinance shall be revised "within a reasonable time" so that it is consistent with the General Plan as amended. There are also open space consistency requirements. (See Section 65910, 65566, and 65567.) These are enforced by mandamus action and the Attorney General.

Consistency is measured by three parameters: use, boundaries, and time.

¹ Implementation measures are also outlined in Table Charts for each policy following that policy.

- The use permitted by the zoning ordinance must be consistent with and reflect the intent of the land use categories it is designed to implement.
- The boundaries of land use areas on the General Plan are intended to be approximate in order for the Planning Commission and Board of Supervisors to adjust land use regulations to factors that are too localized to be reflected on the General Plan. Therefore, lines on the land use map may be adjusted up to 200 feet in either direction, when it is determined that they do not correspond to geographic features (creek, lakes, etc.), streets or property lines.
- A use must not preclude ultimate achievement of the goals and policies at the planned time. A use may not be permitted prematurely in an area reserved for future development even if it is consistent with the land use policy map. It must also be consistent with the goals and policies of the plan as well.

Zoning

In order to implement the Land Use Plan of the General Plan, the County must review and revise its zoning ordinance. To facilitate this effort, the following discussion identifies which zones are appropriate and consistent with the proposed land use categories.

Zoning Revisions for Consistency. Based on a review of existing zoning districts, it is necessary for the County to revise some of its districts and create new ones.

- The Suburban Reserve designation on the Land Use Map has no adaptable zoning district to meet its 1 acre minimum. An interim solution may be the use of the rural residential "R-1" district with a "B-3" overlay which can specify acreage minimums found in land use designation policy.

Some of the areas designated Suburban Reserve in the plan consist of areas best designated for a Planned Development zoning district for specific policy reflecting their unserviceability.

- The R-A Residential Agricultural District (minimum building site for residential uses of 10,000 square feet) is well suited in purpose to fulfill the intent of the Rural Residential land use category. However, the minimum building site must be increased to reflect the minimum density permitted in this land use category of 1 dwelling unit per 5+ gross acre.
- Existing County zoning does not contain a district that can implement the Rural Land category. Uses appropriate in such a district would include, but are not limited to, single-family residences, agricultural activities, growing and harvesting timber, grazing, mining or extracting of mineral resources, recreational resorts, and campgrounds. Twenty acres and larger is considered an appropriate minimum lot size to accommodate the intended uses, recognize hazardous site charac-

teristics, and preserve options to develop the site more intensively when land demand requires and services become available.

- Existing County zoning does not contain sufficient provisions that can implement the proposed Resource Conservation policy. A resource overlay or series of such overlays (TPZ, Recreation Scenic, Mining, etc.) should be considered as a means of fulfilling the intent of the land use policy. The district would be applied in identified environmentally sensitive areas and propose development standards that would serve to insure the integrity of the significant resource. Such standards would typically involve clustering proposed development to preserve the maximum amount of open space and hence reduce potential impacts on the resource.
- The Exclusive Agricultural District is appropriate in purpose to carry out the proposed Agricultural land use category. However, the permitted minimum building site of 10 acres should be increased to 40 acres to reflect a commitment to preserving agriculturally productive soils.

In accordance with Plan objectives and policies, the County shall also:

- Encourage direct applications of geothermal resources by conditionally permitting it in all zoning districts, subject to standards relevant to each district that will insure environmental protection.
- Conditionally permit light industrial uses, such as research and development activities and industrial parks, in commercially zoned lands or through special zoning exception provisions for the floating light industrial policy.
- Adopt Land Capacity/Capability Ordinance(s) and cluster entitlement provision which promote development site problem mitigation and a greater flexibility both for innovative development techniques and the promotion of adequate housing needs.
- Adopt development standards for noise control which would regulate design and construction such as limits on building height, requirements for buffer strips or noise barriers and sound insulation. This could be done as a portion of the zoning ordinance or as a noise ordinance.

Other Zoning Revisions. Other revisions that should be considered upon amending the County's zoning are identified below.

- The U Unclassified District does not implement any of the land use categories and should be deleted.
- The intent of the A-G General Agricultural District is carried out by other existing or proposed districts and should be deleted.
- The intent of the O Open Space District is not clear and should be revised to state clearly that it is to be applied to public open spaces and parks.

TABLE VI-1

APPROPRIATE ZONING DISTRICTS FOR LAND USE CATEGORIES
USING EXISTING ZONING 10/12/81

<u>Land Use Category</u>	<u>Intent</u>	<u>Applicable Existing Zoning Districts</u>
Urban Residential (Up to 20 dwelling units per gross acre)	Establish areas suitable for intensive residential devel- opment, encouraging a mix of different housing types.	R-1 Single Family R-D Duplex Residential R-2 Limited Multiple Residential R-3 Multiple Family Residential, Transient Residential and Professional Office R1-MH Single Family Residential - Mobile Home. M-H Mobile Home
Suburban Residential (1-4 dwelling units per gross acre)	Establish areas suitable for single-family neighbor- hoods.	R-1 Single Family
Suburban Reserve (1 acre minimum)	Holding residential designation until appropriate services or policy is available.	None, although RA-B3 Residential Agricultural minimum building site can be used. However, does not meet basic intent.
Rural Residential (1 dwelling unit per 5+ gross acres)	Establish areas for single- family residential develop- ment in semi-rural setting.	None, although R-A Residential- Agricultural is consistent with the intent of the land use category.
Rural Lands	Identify areas remote from other developed areas or characterized by site constraints such as topo- graphy, fire hazard, and access.	None
Local Commercial	Establish areas for small- scale, localized retail and/or service businesses.	C-1 Neighborhood Commercial
Community Commercial	Establish business areas for communities.	C-2 General Commercial C-3 General Service Commercial C-H Highway Commercial

TABLE VI-1 (Continued)

<u>Land Use Category</u>	<u>Intent</u>	<u>Applicable Existing Zoning Districts</u>
Service Commercial	Establish business areas for heavier types of commercial and semi-industrial uses.	C-3 General Service Commercial
Industrial (Floating Policy)	To establish and allow for areas appropriate for industrial activities.	M-1 Limited Industrial M-2 Industrial (Special zoning exception)
Resource Conservation Policy	Identify areas with significant wildlife habitat, watershed, open space value, flood hazards, and timber production areas.	NONE. The following districts may be adapted "O" Open Space, "TPZ" Timber Preserve, "PF" Primary Flood Plain, Recreation Scenic, etc.)
Intensive Agriculture	Establish areas for the exclusive purpose of agricultural production.	NONE, although A Exclusive Agricultural is consistent with the intent of the land use category.
Resort	For mixed land use for recreation, mountain, water areas.	NONE, although the R-4 district has related provisions.

- The Recreation Combining District which permits recreational uses in R-A Rural Agricultural and A-G General Agricultural Districts only should be deleted, if the recommendation to permit such uses conditionally in residential and commercial districts is adopted.
- Adoption of an occupancy permit process. This process requires that all provisions of zoning, subdivision, building, and health codes be met before a building can be utilized.
- Adopt a Cultural-Heritage Zone to provide regulations for the preservation of sites and structures of a special historical, archaeological or architectural character and to provide for the maintenance and development of appropriate settings for such resources.
- Consider establishing an architectural review board to evaluate development plans.

Compliance With Open Space Ordinance Requirement. State law requires that local governments insure adequate protection of their open space (Govt. Code Sec. 65910). Lake County will satisfy this requirement through the following actions:

1. Amend the zoning for agricultural districts to require larger minimum lot sizes.

Intent: To preserve agriculturally productive Class I-IV soils and range lands.
2. Implement the adopted Timberland Preserve Zone.

Intent: To preserve lands suitable for timber production.
3. Implement the adopted Primary and Secondary Floodplain Districts.

Intent: To minimize risks to public health and safety in flood hazard areas.
4. Implement the Recreation-Scenic District and Scenic Corridor Combining Districts where appropriate after special site study.

Intent: To protect the County's many areas of scenic beauty for recreational and aesthetic purposes.
5. Implement the recommended district proposed to fulfill the intent of the Rural Lands category.

Intent: To permit low intensity development in remote/hazardous areas commensurate with site constraints.
6. Implement Open Space District.

Intent: To preserve open space and permit compatible uses on public open space and parks.

7. Implement overlay districts proposed to fulfill the intent of the Resource Conservation policy.

Intent: To recommend development standards that will allow development to occur while protecting the County's environmentally sensitive areas.

8. Amend the zoning ordinance to conditionally permit resort/recreational development in residential and commercial land use categories.

Intent: To encourage the development of recreational opportunities.

9. Preserve and maintain publicly owned lands on the Clear Lake shoreline for public access.

Intent: To maximize opportunities for residents and visitors to enjoy Clear Lake.

Implementation Policy for Specific County Areas

- Areas adjacent to the City of Clearlake designated Suburban Reserve should not be converted to higher densities until the city is ready to assume responsibility for servicing those areas.
- Communities' separate identities should be considered when reviewing development projects which tend to physically connect communities. The following criteria and/or findings shall be made by the Lake County Planning Commission prior to the converting of those lands designated Suburban Reserve, on the Lake County Land Use Map, to Suburban Residential.

Criteria/Findings

1. That the area being considered will not reduce the excess service capacity of the local sewer district to a capacity below 25%.
2. That the local sewer and/or water district has considered the service of the area and made a finding that it is a natural expansion not incurring excess service liabilities to existing patrons of the district.
3. That the conversion of the area does not conflict with a proposed master water plan for the County.
4. That the area-wide transportation council has made recommendations to the Commission concerning circulation and, that a preliminary circulation plan for the area is approved.
5. That the area does not conflict with an incorporated community's general plan.
6. That the conversion does not encourage leap frog development.

7. That the timing and phasing of the development of the area will not significantly impact school, fire, and police services for the neighborhood/community area.
 8. And/or that the development is 20 acres or larger being processed under the "PD" process having a self sufficient sewer and water system which can be maintained on an ongoing basis.
- The following areas should not be considered for land division below one acre lot sizes until either January 1985 or until the County's population exceeds 42,000 persons unless the Planned Development concept is used.
 1. Areas in the Suburban Reserve designation above the community of Lucerne within Sections 6, 7, 25, 31 and 36.
 2. Areas designated Suburban Reserve above Nice in Sections 22, 23 and 26.
 3. Hidden Valley areas designated for Suburban Development.
 4. Areas classified Suburban Reserve adjacent to Lower Lake in Sections 1, 11 and 12.
 5. Areas west of Lakeport and Highway 29 in the Suburban Reserve designation.
 6. Areas located adjacent to Highway 53 north of the City of Clearlake within the Suburban Reserve designation.
 7. Those areas designated Suburban Reserve in the Lake Pillsbury area.
 - The following areas are subject to special acreage minimums unless a community sewer or water service system is available serving more than 200 dwelling units:
 1. Areas adjacent to the communities of Middletown and Upper Lake within the Suburban Reserve designation may not be developed into lots of less than 1 acre minimum unless a public sewer system is available.
 2. Properties located along the southshore area within the Suburban and Suburban Reserve designations shall not be divided into smaller than 1 acre minimums until a community sewer line is installed.
 3. The Guenoc Ranch area should not be permitted to divide into lot sizes of less than 1 acre until either the year 1985 or upon the County reaching a population of 42,000 persons, or unless a planned development concept is used.
 4. Special consideration should be given to Class I-IV soils which are designated for residential development on the Land Use Maps.

During zoning and land division proposals a determination should first be made that the conversion of these soils is necessary for the orderly growth of the area. Further that the timing is appropriate whereby the conversion will not compromise adjacent agricultural lands not designated for residential development.

5. Development projects adjacent to Highway 29 and 53 within the Lower Lake area should be designed to require the least number of access points in order to promote efficient traffic flows, free from congestion and hazards.
6. Multi-family developments should not be located in Cache Creek floodplain.
7. Development proposals along Highway 20 one mile east of Upper Lake and Clearlake Oaks should be evaluated and considered as to reducing access points, including the use of a frontage road.
8. A new Cole Creek crossing should be considered in Kelseyville in order to remove traffic congestion from Konocti and Sylar Roads.
9. Areas designated "PF" on the Land Use Map are Solid Waste/Hazardous Waste Site areas which shall have restrictive ordinance provision for residential development within 2000 feet surrounding such facility.
10. That the 640 acres north of State Highway 29 which surround the proposed Performing Arts Center designated Suburban Reserve only be developed using the Planned Development Concept.
11. The area south of the City of Lakeport is in a state of transition from Heavy Commercial/Retail Commercial and Residential development. For the purposes of General Plan consistency, the area defined as 2500 feet south of the center of Section 25 should be developed or zoned under the mixed use concept, in order to appropriately define the transition areas for different uses.

Refer to Table VI-2 for population projections by residential land use designations.

Subdivision Regulations

A number of policies in the Plan suggest revisions to the County's subdivision regulation. In particular, the regulations should be amended to incorporate specific data and design requirements related to noise and roads contained in the Community Development Plan and to surface faulting, ground failure, and flooding contained in the Resource Management and Conservation Plan.

TABLE VI-2
POPULATION PROJECTIONS BY RESIDENTIAL
LAND USE DESIGNATIONS, YEAR 2000

<u>Land Use Designation</u>	<u>Total Designated</u>	<u>Population Density Net Acreage</u>	<u>Net Dwellings (Includes 2nd Home & Vacancy)³</u>	<u>Population</u>
Urban	1,600 Acres	12 Persons/Acre	6 du per Acre	9,800
Suburban	13,827 Acres	6 Persons/Acre	4 du per Acre	41,384
Suburban Reserve ¹	11,100 Acres	.8 Persons/Acre	.5 du per Acre	5,605
Rural Residential	46,000 Acres	.14 Persons/Acre	.09 du per Acre	4,231
			Unincorporated	61,020
			Incorporated	26,960
				<hr/> 87,980 ²

¹Includes both restricted or non-convertible and convertible Suburban Reserve lands, Planned Development, etc.

²This table assumes an average gross versus net and not the actual assumption used for individual communities. Table IV-9 summarizes individual communities. (This difference in total units versus population of Tables reflects both individual community assumption qualifiers and some residential acreages not within the community.)

³(Net assumes areas used only for residential development. Does not include commercial, streets and roads, industrial, etc.)

Land Capacity/Capability Implementation Policy

Perhaps the most important of the regulation methods proposed is the land capacity ordinance. This ordinance would replace the existing zoning provisions as the basis for determining allowable density. The existing zones, however, would continue to be used to designate the type of permitted use and to establish the base density which would be modified by application of the land capacity ordinance. The land capacity ordinance is a major means of promoting the public health and safety, and open space and conservation provisions.

The primary intent of the ordinance is to set the allowable level of land use based upon the conditions of the land rather than, as has been the normal pattern, on arbitrarily determined densities that require alteration of the land, vegetation, and hydrology for development. The ordinance would require thorough documentation and analysis of both on- and off-site conditions as the basis for determining allowable density.

A land capability/capacity system should be adopted in order to provide an added layer of protection against especially difficult soil and slope hazards. These should include provisions which recognize the hazards of shrink-swell behavior, steep topography, and poor absorptive qualities for sewage disposal, as well as other problems identified in this element. Within designated Improvement Areas, where lands may be extremely valuable, urban/suburban density zoning may be applied appropriately regardless of soil problems, provided permanent systems are incorporated in the development to compensate for the soil hazard. Development regulations should require, for example, special engineering specifications in areas having poor foundation support because of shrink-swell, low bearing strength, or other hazardous soil conditions.

To implement the policies of this plan, the following are policy guidelines giving an overview of what sensitivity or provisions should be included in the ordinance. The ordinance must include provisions and exceptions to standards included in the ordinance which allow for state of the art technology and alternative technologies (wind power, solar, geothermal, package treatment systems, etc.).

Capacity System Overview Policy

- I. Special areas identified as significant public value areas should include the following, where identified:
 - Areas for groundwater recharge
 - Areas of low soil bearing strength
 - Prime agricultural soils
 - Areas of high erosion potential
 - Wetland areas
 - Areas of excessively sloping land (over 30% slopes)
 - Areas with severe limitations for septic tank systems
 - Rock, sand, and gravel deposits, and other areas of high mineral resource value.

2. Areas classified as prime agricultural land should be preserved for agricultural use when outside of urban designations. The existence of urban designations should not be used to justify leap-frog or scattered development on prime agricultural soils (Class I, II, III, and IV soils).
3. Significant deposits of sand and gravel should be reserved as open space until they can be developed. Any significant deposits of sand and gravel within urban areas should be identified and marked on a Countywide resources map. Such areas should be zoned for resource extraction until such extraction has been completed, and then zoned for subsequent uses.
4. A matrix should be developed listing all soils and ratings for various uses such as residential, industrial, commercial, septic tank, drainage fields, intensive animal wastes, lagoons, roads and airport runways, campgrounds, cultivated crops, grasslands, and forests.
5. Adequate grading, erosion, and sedimentation control provisions should be applied to all subdivision and parcel map developments. To assure conformance to the ordinances, a performance bond should be required, where applicable.

Hazardous Conditions

6. Areas subject to slides or severe hazards to public safety, such as soils which cannot provide a good foundation under any circumstances, must be placed in overlay zones where construction of buildings is prohibited or limited to specific sites.
7. Areas of excessive slope (over 30%) should not be used for ordinary development purposes unless special care and extraordinary design features have been incorporated into the project.
8. Areas of high water table and unstable soil conditions should be subject to special soil and slope provisions.
9. In some circumstances, attempts may be made to direct the acquisition of park and open space land to areas where the soil has such problems as to make improvements unduly expensive. The assessor should be encouraged to assess the value of such hazardous lands significantly below land which does not have such hazards and consequently high development costs.
10. Areas dominated by soils which exert severe limitations for development should be retained in low intensity uses.

Sewage Disposal

11. When zone changes encourage more intensive uses in developed areas, the ordinance should require connection to community

sewer systems if the higher intensity use occurs within 880 feet of community sewer facilities.

12. Soils defined as having severe limitations for septic tanks such as hardpan, high water table, etc., should not be allowed to be developed for improved uses such as residential, commercial or industrial unless they are on community sewer systems.
13. Areas should be identified within Urban Areas in which soils are not suitable for onsite disposal of sewage effluent. These areas could then be designated for small lot development, where urban development should only be permitted when it can be connected to community utility systems. In areas of moderate limitation, urban development without the use of community systems should be carefully considered and approached with caution.
14. Urban and suburban zoning of land should not be allowed in areas not serviceable by community sewer systems and where septic tank effluent cannot be handled well within existing soil limitation. Public sewer systems are economically infeasible in such areas. Therefore, these lands should not be divided for urban or suburban uses or allowed building permits for occupied structures, other than farm dwellings.
15. Structures and on-site sewage disposal systems should be prohibited in primary flood plains and permitted only in secondary flood plains when appropriate protective devices are used, unless well designed systems meet strict performance standards.
16. Percolation tests should not be performed in late summer or early fall when the soil is dry and the water is deep in the soil. Rather, percolation tests should be performed only during those times of the year when accurate determinations regarding septic tank adequacy can be made.
17. Percolation should always be examined in relationship to flood plains and surface water streams. If percolation tests show extremely high percolation rates near streams or lakes, septic tanks should be prohibited.
18. High percolation rates on steep slopes indicate a potential for hazardous surfacing of effluents. Septic tank systems should be prohibited in such places.

Erosion

19. It is recommended that vegetational borders around edges of farm fields be left as an aid in reducing wind-caused erosion. Windbreaks set at intervals in strips at right angles to the prevailing wind are also recommended.
20. Erosion problems can be especially difficult in areas undergoing conversion to suburban/urban uses, where irrigation has been

terminated, or construction practices have removed the top layers of soil. Where land has been cleared and is being held for residential uses, ground cover should be sown (such as annual grasses), or other means of holding the soil should be applied until landscaping can be completed.

Groundwater Recharge Areas

21. Groundwater recharge areas should be reserved in conservation zones wherever they can be determined to be of substantial use. Such action should preclude the installation of impervious materials covering the surface of the ground, unless there are unusual extenuating circumstances or if done through using cluster policy provisions.
22. Require in large areas of paving (such as commercial or industrial areas) a drainage system which will be tied to storm systems, or preferably directed to collection basins so that polluting runoff will not percolate into groundwater or Clear Lake without filtration and soil bacterial action.
23. Where ponding lots are utilized for provision of drainage facilities, attempts should be made to locate them in areas where the soil is suitable for groundwater recharge.
24. In areas set aside for urban growth, that are within residential designations, recharge areas could be suggested for use as parks, school sites, and other open space character uses. Within these uses, porous paving could be used (such as cedar chips or other type of covering) which would establish a minimum covering without preventing percolation.
25. Individual septic systems and attendant leach lines or pits should be located on the same parcel of land as the structures or facilities served.

Land capability analysis is a sophisticated research tool which can be extremely useful as a preliminary or support study leading to the development of general or specific land use plans. This study technique assumes that instead of prescribing arbitrary planning or design criteria for an area, it might be in order to first find the "plan" that nature has already laid down. The basic principle is that the aquifers, difficult soil areas, slopes, floodplains, and other physiographic determinants should be identified and mapped, and then reflected in the core of the plan. (Note special study zones in the Seismic and Geologic Hazards elements).

The land capability technique involves a rigorous inductive analysis of all physical factors bearing upon the use of the land. Economic and social factors should also be given weight in the final plan-making stages. However, the underlying concept is that natural features should provide the basis for the plan or, at least, be carefully accommodated in development proposals.

Soil Surveys and interpretive maps provide substantial bases for carrying out a land capability analysis. For example, detailed maps showing the following soil-related characteristics would be highly useful in such a study:

- Sloping topography
- Soil limitations - foundations
- Soil limitations - water table
- Soil limitations - septic tanks
- Soil erosion
- Hydrology - aquifer recharge
- Soil drainage
- Flood prone areas
- Prime agricultural land
- Sand and gravel deposits.

In addition to soil slope factors, other physiographic features to be compiled and mapped would include the following:

- Bedrock geology
- Natural climatic vegetation
- Land use/access
- Wildlife habitats
- Historical features
- Scenic land
- Natural boundaries - barriers
- Surface water - natural and man-made
- Groundwater reservoirs
- Watershed boundaries.

Again, the basic method of analysis is to chart all these physical factors on a map or map overlays. In actual practice, the process is much more complex than that, due to information that a project applicant may submit. In order to carry out a workable planning program, based upon physical determinants, certain value judgments must be made via established policy or performance standards.

What are the public values that should be associated with soils and slope? Given some knowledge about soils and slope, a series of value policy statements can be constructed which recognize the function of soil and slope behavior in the ecosystem. It is recommended that the following statements be given recognition as "public values" upon which land capability analysis would be based:

- Aquifer Recharge - Aquifer recharge areas serve a valuable public purpose in that these areas, more than any other, contain the physical properties necessary to convey surface water to groundwater reservoirs. Because of current overdraft conditions in many parts of the County, it should be in the highest public interest that these areas remain free of impermeable surfaces wherever possible.
- Low Bearing Strength - Areas characterized by unconsolidated materials and/or high shrink-swell soil behavior exhibit major limitations for building foundations and roadways. Allowing urbanization of these areas results in increased public and private costs associated with

additional construction costs, maintenance, and potential property damage. It is, thus, in the public interest that such areas be maintained in timber, agriculture, resource management, and open space uses.

- Prime Agricultural Soils - Lake County is endowed with extensive areas of prime agricultural soils which are a unique and rare occurrence in nature. The soils constitute some of the best arable land in the world and should be used for agriculture or preserved in open space at its highest and best use. It should be in the highest public interest that these lands be protected from non-agricultural encroachment. Only where these soils are located inside established Urban/Suburban areas should they be considered "available" for development.
- Erosion Potential - The problems of erosion and sedimentation affect everyone. Erosion and sedimentation cause land degradation through scouring and sediment damage, reduce storage capacity of lakes and reservoirs, cause damage to transportation facilities, increase the incidence of flooding, and reduce the attractiveness of water-based recreational activities. Areas possessing a high potential for accelerated erosion should be reserved for low intensity use so that erosion-sedimentation potential is minimized.
- Wetlands - Areas characterized by poor surface drainage or flooding potential are hazardous to life and property. The public interest would be jeopardized if intensive use of these areas is permitted. Land which is subject to these hazards should be conserved for agriculture, recreation or open space use.
- Sloping Topography - Excessively sloping land (over 30% slopes) is extremely difficult to develop into residential densities without degrading land, water and wildlife resources. The inherent instability of most steeply sloping land necessitates careful design and construction techniques for hillside development. It is in the public interest to reserve steeply sloping land in open space use when more suitable topography is available for development.
- Waste Disposal - Some soils are inherently unsuitable for on-site absorption sewage systems. If the soil is unable to remove or nullify harmful substances, serious health hazards could result. It is in the public interest that where such soils are found, other means of sewage disposal should be found. Such land should be retained in open space use unless the area is situated within Urban/Suburban designations.
- Construction Materials - Rock, sand, and gravel deposits are essential to the growth and prosperity of the County because they are basic to the construction industry. Locational factors are vitally important since deposits, obviously, must be recovered where they are found. It should be in the public interest that these deposits be developed before the land lying above is converted to another use.

In this plan, the spatial distribution of these different soil characteristics and behavior within the County are described on a generalized basis. These are much too generalized for detailed land capability analysis on a precise

scale. However, they are suitable for general planning on a geographic area or Countywide scale. Thus, it is feasible to initiate a generalized Countywide land capability analysis with the soils information currently available. As more information regarding wildlife habitats, vegetation, geology, and the like, becomes available, the land capability analysis will become more precise and the policies can be further refined. Furthermore, an up-to-date detailed soil survey, when available, will add more refinement to the analytical process and provide a basis for detailed planning work by small areas. As a result of this process, land use decision making will become more flexible, more accurately reflecting physical constraints, new technologies and economics, when considering densities and the advantages and disadvantages of a proposed development site.

This implementation policy should be actively pursued by reviewing existing data in the General Plan and evaluating existing County codes, ordinances and requirements, with the intent of including provisions or a special review system to insure that only properties generally identified as needing additional study are required to meet special review or requirements prior to development. These properties can be better outlined on USGS quad maps in the Planning Department, which should be made available to the public. Another alternative to an individual Land Capacity/Capability ordinance, or individual ordinances, is to institute overlay zoning districts identifying the various safety, preservation or resource processing areas. This can provide better public awareness, more flexibility, and issue-oriented regulation.

Building Code Amendments

In addition to the latest edition of the Uniform Building Code, the County should consider additional building standards including special foundation requirements and further grading restrictions for lands identified as unstable, special measures to resist seismic loadings, added foundation requirements for liquefiable and expansive soils, special limitations on exterior building materials in wildfire risk areas, specific floodproofing measures for construction in flood-prone areas, and acoustical design measures for noise-sensitive structures.

Information should be provided on noise compatibility measures to builders, developers, architectural firms, and the public in general. Acoustical information can be maintained as a part of the library to serve as a reference source. Public information flyers could be prepared which would inform the public of noise impacts and methods of mitigation.

Specific Plan

The California Government Code (Section 65450) allows local governments to prepare specific plans that will establish site development regulations, including specification of type of use permitted, allowable density, building placement and bulk, areas to remain in open space, and provisions for roadway, utility, and landscaping. These provisions enable a community to develop an area with greater flexibility than would otherwise be possible using conventional zoning. The technique is particularly appropriate for

larger development sites with a complex variety of natural and man-induced conditions and land use needs. The County should consider requiring the preparation of a specific plan in areas where a large number of substandard lots exist, which could not otherwise develop individually because of site or service constraints or areas where the County feels that more flexibility than is permitted under existing zoning and subdivision is required in preparing a well conceived development plan.

The plan is, in effect, a publicly prepared and adopted planned unit development proposal. It can be financed by groups of interested developers as part of the environmental impact report process or through special assessment district procedures.

It should be noted that specific plans must be prepared for land projects if all of the following criteria are met:

- The subdivision or subdivided lands contain 50 or more parcels, of which any 50 are
 - not improved with residential, industrial, commercial or institutional buildings; and
 - offered for sale, lease, or financing for purposes other than industrial, commercial, institutional or commercial agricultural uses.
- The subdivision or subdivided lands are located in an area in which less than 1,500 registered voters reside within the subdivision or within two miles of the boundaries of the property described in the final public report.
- Not constituting a community apartment project as defined in Section 11004, a project consisting of condominiums as defined in Section 783 of the Civil Code, or a Stock Cooperative as defined in Section 1103.2.

REVIEW PROCEDURES

EIR Process

The state-mandated EIR process can be used as a means of coordinating and integrating various development review procedures into an internally consistent regulatory process organized for efficient use and administration. Such a coordinated development review process offers advantages both to developers and to local planning staffs. The following EIR process is recommended:

1. Data requirements which are necessary in preparing the "environmental setting" portion of an EIR shall be met through information called for subdivision or Planned Development (PD) proposals.
2. After the above data has been gathered and an allowable level of development has been determined through the Land Capacity Ordi-

nance, described earlier, the applicant shall submit tentative maps to the County with documentation of the development alternative(s) considered and the impacts associated with each alternative. (This requirement should be sufficient to meet EIR requirements for considering project alternatives.)

3. The County or an EIR consultant selected by the County shall review the applicant's tentative map submittal and shall determine if EIR requirements have been satisfied. If so the staff or consultant will prepare the draft EIR incorporating any plan modifications, design changes, or other conditions considered necessary to mitigate adverse impacts.
4. The required hearing for the tentative subdivision or PD map would be held jointly with the EIR hearing and the application approved subject to whatever conditions are considered essential.
5. The final map would be submitted for staff review to determine compliance with adopted provisions. Final approval could then be granted.

Geothermal Development

Careful planning and implementation measures can serve to facilitate the development of the County's geothermal resources while reducing potential land use conflicts and environmental degradation. The following implementation measures are proposed to assist in the orderly development of local geothermal resources.

1. The County shall, within a reasonable time period, revise its "Conditions, Procedures and Performance Standards for Geothermal Regulation". These updated standards will then be considered in the use permit process and will be used to implement general plan policies.
2. Permitting procedures should be reviewed and revised where necessary for each stage of development, including temperature observation holes, exploratory wells, field development, and power generation.
3. An up-to-date map indicating the location and status of all approved geothermal exploratory, field development and power generation projects should be maintained for public information purposes at the Planning Department.
4. Insurance and bond requirements should be reviewed and appropriate levels of protection established, if necessary, to insure adequate site restoration upon cessation of geothermal activities.
5. The County should maintain sufficient staff and funding levels to plan for and manage the orderly expansion of local geothermal resource development.

Special Review for Clear Lake Development Proposals

It is recommended that the County establish design review procedures to govern lands having an immediate visual or functional relationship to Clear Lake. The review would be undertaken to insure that the impacts on lake use, including direct and view access, are fully recognized and that developers design their projects to encourage public access and to reflect the character of established or planned development. The review zone should include:

- all properties within 500 feet of the shoreline,
- other lands on the lakeside of collector roads within 1,000 feet of the lakefront, and
- land adjoining shoreline roads on the landward side to a depth of 500 feet where the slope is 15 percent or less and up to 1,000 feet where the slope is steeper and more visually prominent.

Government Section 65401

A procedure often ignored but required by State law is referral of proposed public works by each County officer, department, board or school district to an official agency designated by the Board of Supervisors. This procedure allows the County to insure that capital improvements being planned for by other governmental districts conform with the growth assumptions and patterns contained in the County's General Plan. The official agency is responsible for listing and classifying all such recommendations and preparing a coordinated program of proposed public works for the ensuing fiscal year.

Review Procedures for Protection of Cultural Heritage Resources

The County should establish a process for reviewing development projects to ensure the protection of cultural resources. The review would be conducted to provide data to determine impacts, if any, and to establish procedures for mitigation. The purpose of this procedure is to speed up the permitting process, to cut down costs for both the developer and the County, and to insure compliance with local, state, and federal regulations. The review process should include:

- Early identification of cultural resources in the planning process on a project-by-project basis.
- Establish procedures for protecting and/or mitigating impacts to cultural resources which may occur as a result of redevelopment.
- Establishment of a Cultural Heritage Zone providing a tax incentive for private land owners who are interested in protecting cultural resources on their property.

- Establish a County ordinance for the protection of identified cultural sites from vandalism.
- Contract with qualified cultural resource coordinator for the development of the review procedures and ordinances for the protection of cultural heritage resources.
- Develop an informational pamphlet pertaining to cultural resources for distribution to the public.

HOUSING PROGRAM

The County must take an active role in promoting the provision of adequate housing for the County's residents. It is particularly important in light of the County's population composition, which includes a large proportion of retirees and elderly who are on fixed incomes. County actions required to implement a sound housing program are found in Table IV-23. The key actions are summarized here.

Adequate Supply

The County over the next five years is committed to promoting the development of 3,505 new permanent year-round residential units. This amount is estimated to satisfy the projected population growth and the housing needs of all economic segments of the County.

An overall vacancy factor of 5 percent was included to allow some flexibility in the choice of housing types and location. The Land Use Plan allocates enough residential land to more than accommodate the identified need.

Action. To insure that this land supply is available for development, the County, as an initial step, must revise their zoning ordinance to be consistent with the General Plan. The County Planning Department should begin this effort immediately upon adoption of the Plan. Consistent with policies in the housing section, the County shall designate higher densities whenever practical.

Affordability - Supply of Housing

A variety of measures have been recommended to insure not only that there are adequate residential sites, but also that the units constructed are affordable to Lake County citizens.

Higher densities greatly help in the provision of lower cost housing. For example, consider two identical sites, one permitting one dwelling unit and the other permitting four. From an economics perspective, the developer does not have to mark up the price on the four units as much as on the one unit in order to earn a fair profit. In addition, a smaller lot results in lower on-site improvements and development costs. Thus, by permitting higher densities where services are available and surrounding land uses will

not be adversely impacted, the County will be promoting more affordable housing.

The type of housing is also a major determinant in the cost of housing. Mobile homes are typically the least expensive housing. Lake County should continue to provide opportunities for mobile home developments.

A third area over which the County can effectively influence the cost of housing is by reviewing its development standards and review procedures. Multiple reviews by different County departments and overly restrictive development and design standards add to the cost of housing.

Action. The following specific actions shall be undertaken to assist in the provision of affordable housing.

- The County will continue to designate, where appropriate, single family lots for mobile home zoning.
- The County Planning, Building, and Public Works Department shall review their respective regulations, guidelines, and standards as they relate to the provision an construction of housing and consider approaches to relaxing them without sacrificing public health and safety. This should be done within two years after adoption of the General Plan and periodically thereafter at regular intervals.
- In order to develop, construct, or require housing projects with 50 percent or more of the units reserved for low and/or moderate-income households, the County must pass a local Article 34 referendum. Article 34 of the State Constitution requires a majority vote approval before a locality can expend public funds towards such projects.
- The County shall actively pursue state and federal programs that will assist in the construction and provision of low- and moderate-income housing. Information regarding such programs as HUD's Direct Loans for Housing for the Elderly or Handicapped (Section 202) and Lower Income Rental Assistance (Section 8), the Farmers Home Administration's Rural Rental and Cooperative Housing program (Section 515), and the California Housing Finance Agency's multi-unit loan program and home ownership and home improvement loans shall be disseminated to various public and human service agencies.
- The County shall work with groups interested in the possibility of establishing a non-profit corporation for the purposes of developing low- and moderate-income housing. The corporation would be managed by a Board of Directors who typically would be selected by the Board of Supervisors. The non-profit corporation would be authorized to float revenue bonds to finance the acquisition and construction of public facilities which could be leased to the County Housing Authority. The revenue bonds issued are secured by an indenture pledging the lease payments to pay interest and principal on the bonds. A non-profit corporation can also sponsor assisted housing without actually developing the facilities by itself, as indicated above. It can also assemble a development package and sell it to a profit-motivated developer or participate in a joint venture with a

profit-motivated developer. Both the federal and state governments provide funds to assist non-profit development corporations. The HUD Section 8 New Construction and Section 8 Substantial Rehabilitation programs, the State's Rental Housing Construction Program, Rural Redevelopment Loan Funds, and Urban Development Loan Fund should be considered as potential funding sources.

Affordability - Demand for Housing

Although there are many steps available to the County to reduce housing costs, oftentimes low- and moderate-income households will still be unable to afford the housing. Consequently, it is necessary to complement the above actions with actions that will assist households in meeting housing payments.

Action. The following specific actions shall be undertaken to assist low- and moderate-income households obtain housing.

- The County shall disperse information about relevant state and federal funding programs that assist low- and moderate-income households with housing payments. Programs such as the Homeownership Assistance for Low- and Moderate-Income Families (HUD revised Section 235), Homeownership, and Rehabilitation Loans (Farmers Home Administration, Section 502), and Homeownership Assistance (State Housing and Community Development, SB 229/AB 333), are examples.
- The County shall investigate the feasibility of administering and possibly participating in an equity sharing program. The County Housing Authority would apply to the State Housing and Community Department for funds for a particular project. Upon receiving a funding commitment the County could offer assistance to low-income households who wish to purchase rental housing being converted to condominiums or cooperative ownership, who wish to purchase mobile homes on permanent foundations and not located within mobile home parks, or who wish to purchase shares in a cooperative corporation which owns a mobile home park. The buyer would then purchase, occupy, and manage the property. The State would share in the eventual profits when the property is sold in a proportion based upon its initial investment (as much as 49 percent of the original purchase price).

The County could also issue tax exempt mortgage revenue bonds. The proceeds could then be put into an equity program by which the County would assist low- and moderate-income households with their mortgage payments. The County would share the appreciation in value of the dwelling unit upon its sale with the participant.

The County could also work with human and social service agencies to identify individuals who would be interested in sharing living accommodations.

Rehabilitation

The housing conditions survey conducted as part of this planning effort indicates the majority of the County's housing stock is in good condition; however, there are areas where the need for rehabilitation is evident.

Action. A two pronged approach is to be adopted by the County.

- First, a housing rehabilitation program sponsored jointly by the County Planning and Building Departments shall be developed. The program shall identify areas where the housing stock is still adequate but is approaching a point where rehabilitation may be necessary. HUD's Rehabilitation Loans (Section 312) are a possible source of funding.
- Second, the County shall actively pursue and assist others in obtaining available state and federal monies to rehabilitate the County's housing. The primary source of funding include the Farmers Home Administration Homeownership and Rehabilitation Loans (Section 502) and Home Repair Loans and Grants (Section 504) and the State's Deferred Payment Rehabilitation Loan Program and Demonstration Elderly Housing Rehabilitation Program.

The County shall also investigate the use of funds made available by the Marks-Foran Residential Rehabilitation Act, enacted to reverse the decline of entire neighborhoods by concentrating loans in designated residential rehabilitation areas. The legislation allows local governments in California to issue tax-exempt revenue bonds to make long-term, below market interest rate loans to owners of residential properties in declining neighborhoods for the purpose of rehabilitation. The local agency is obligated to make public improvements to upgrade the area and to enforce the rehabilitation standards in 95 percent of the residences in the area. There may be a time limit of two years to accomplish this work. Through a public participation program, areas are chosen which contain a large number of deteriorating residential buildings but where, with sufficient loans, rehabilitation of nearly 100 percent of the homes is likely. Rehabilitation of buildings located outside of a designated rehabilitation area can be financed under this Act if they are to be occupied by low- or moderate-income persons.

Future Revisions

At the present time, Lake County and the Cities of Lakeport and Clearlake appear to have an equal distribution of lower income households. Consequently, the County's housing discussion does not contain a fair share allocation plan.

When the detailed census information becomes available, the County Planning Department should review and analyze the housing characteristics and needs, and possibly revise some of the housing program priorities.

The Census data should also be considered as the basis for preparing a Housing Assistance Plan. The Plan covers many of the same things as the

County's housing element but must be submitted to the federal government in order to become eligible for Community Development Block Grant funds. These funds may be used to finance a wide range of community development activities.

The County shall evaluate its housing element of the General Plan on a periodic basis to determine the effectiveness of the identified housing programs, to identify new sources of funding, and to assess the pattern of development and growth rates in the County relative to the projected housing needs. Such reviews shall not occur less frequently than every five years, except that the first revision shall occur by July 1, 1984, as required by state law.

OPEN SPACE ACTION PROGRAM

Because of the extensive open space and recreational opportunities within the County, the open space action program emphasizes the protection and preservation of existing resources while insuring adequate access to these resources consistent with their ability to tolerate human activities. As approximately 51% of the County land surface area is already publicly owned, additional public acquisition of open space land is generally a lower priority, although unique and critical resource areas undergoing high development pressures, access to recreational facilities, flood control/park projects, etc., may warrant additional public acquisition. The following paragraphs include open space program actions addressing the preservation and production of natural resources, and the provision of open space for outdoor recreation and public health and safety.

Natural Resources Protection and Management

The specific zoning mechanisms available to accomplish the open space/nature resource objectives are identified in the Implementation section on zoning, and compliance with open space ordinance requirements. Implementation tables for each policy section also address the specific measures needed to carry out resource protection and open space policies. In brief, development in critical natural resource and conservation areas (as identified in Figures IV-16, V-3, V-6, and V-8) shall be subject to appropriate zoning, overlay zoning, or districts to protect prime agricultural soils, to preserve timberlands, minimize flood hazards, plan for compatible uses on public lands and near large scale quarry/mineral extraction operations, and preserve wetlands, riparian habitats, and rare and endangered species.

Only compatible development would be allowed contingent upon the adoption of a development plan that is consistent with the underlying zone and insures the integrity of the resource through mitigation measures which implement the General Plan, Creek Management and Mineral Reclamation Plans, Land Capacity Ordinance and clustering policies.

As the protection and enhancement of lakeshore wetlands, riparian habitats, and rare and endangered plant and animal species are of critical concern wherever they occur, low intensity zoning, creek and lakebed

management, review and implementation ordinances should be reviewed, continued, and expanded where appropriate. Appropriate buffer areas and setback requirements should also be enacted. Land use policies to preserve environmentally sensitive plant and animal habitats are listed in the Plant and Animal Resources section of the Resource Management and Conservation Plan. Figures V-5 and V-6 indicate the locations of many sensitive habitat areas. In addition, the County environmental review process should be carefully reviewed, and revised if necessary, to insure that all potentially adverse projects in sensitive areas are adequately evaluated.

Options to develop productive resources such as agriculture, geothermal, forestry, and minerals are preserved by permitting only low intensity uses in areas with identified resource value. The Forest Taxation Reform Act of 1976 restructured the taxation of timber and timberland by replacing the ad valorem property tax on standing timber with a yield tax on harvested timber. The assessor has identified appropriate areas in the County but others should be encouraged to participate. Forest land use policies are addressed in the Resource Management and Conservation Plan in the Land Resource section and on Figure V-3, potential Timber Preserve Zones. The County Surface Mining and Reclamation Ordinance and the Creek Management Plan will help to implement the General Plan's policies on protection of the County's mineral resources. Mineral resource land use policies are also listed in the Land Resources section with extraction sites located on Figure V-3.

Public open space lands are divided into two general categories: recreation lands and waterways, including public parks and many lakes that are used for water related activities; and federal and state lands that are primarily administered under the multiple use concept. Public lands are identified and further described in the Parks and Recreation section in the Community Development Plan (see Figure IV-16). Policies and implementation measures designed to preserve, enhance and provide access to Clear Lake are located in the Clear Lake Section of the Resource Management and Conservation Plan. The County currently has major responsibilities in cooperation with other agencies for permit processing of projects in lake-shore areas at Clear Lake. Special ordinance provisions should be continued and revised if needed, to permit County regulation below Clear Lake's high water level for docks and other construction activities which might impair navigation, increase erosion or degrade wetland areas. The previously adopted County Open Space District should also be implemented to help identify and preserve open space and compatible uses on public lands and in parks.

Finally, an important implementation mechanism for open space, natural resource, and habitat protection is the Land Capacity Ordinance, which is intended to insure that permitted development densities are appropriate to the site with its associated resource values and hazard constraints. If used in conjunction with the cluster policy, residential development which may conditionally occur in these areas will only occur after appropriate CEQA review and a determination that the resource will not be compromised. Land Capacity/Capability policies are stated in the Land Capacity/Capability Implementation policy section of this chapter.

Agricultural Preservation

Agricultural land preservation is highlighted because of its importance to the County's economy and lifestyle. It is recommended that the Planning Department coordinate with the Agriculture Commissioner and the County Farm Bureau to monitor the amount of agricultural land that is converted to non-agricultural uses on an annual basis. The essential action necessary to protect the County's agricultural resources is to rezone the identified agricultural areas consistent with the minimum lot sizes recommended in the Plan. In most cases Class I-IV soils have been reserved for agricultural uses. Agricultural policies and implementation measures are stated in the Agricultural Resource Section of the Resource Management and Conservation Plan. Agricultural lands (Class I-IV soils) are shown on Figure V-3. Under the Williamson Act (California Land Conservation Act), jurisdictions are authorized to sign enforceable restrictions with the owners of agricultural land in order to prohibit subdivision or premature development. In exchange, land subject to an enforceable restriction is assessed at a lower rate. This mechanism assures the jurisdiction that land will not be developed in a given time period and provides landowners with an incentive—in the form of reduced taxes—not to develop their land.

The County should also consider encouraging the use of open space easements, as provided for by the 1969 Open Space Easement Act. Under this arrangement the landowners turns over the right to develop to the County for a minimum of 10 years, in exchange for a reassessment of the property. This mechanism could be employed by the County as a condition in the situation where a landowner wanted to provide additional homesites on his property.

Public Access

Particularly important to the open space action program are the County's efforts to provide access to Clear Lake. Clear Lake public access policies and implementation measures are listed in the Clear Lake section of the Resource Management and Conservation Plan. It is recommended that:

- The County investigate the possibility of land swaps with private property owners where this will enable the consolidation of County properties into more useable parcels.
- Public lands declared surplus be acquired by the County for public shoreline use.
- An inventory of public lands fronting on the lake be maintained and a program to develop these for public access and water-related uses be formulated.
- Where appropriate, uses on vacant or redeveloped lands should be restricted to uses and facilities whose primary function is to provide for public access and use of the lake or commercial uses which derive economic benefits from its shoreline location.

Hazard Prevention

Preparation of the Land Use Plan integrated available information on natural hazards, as well as natural resources. Intensive development is located away from flood hazards, landslide areas, and topography of greater than 30 percent slope. To insure that these policies are carried out the County shall rezone its land consistent with the Land Use Plan. Hazard areas are shown on Figures V-7, V-8 and V-9. Hazard policies and implementation measures are located in the Geologic and Seismic Hazards, Flood Hazards, and Wildland Fire Hazard sections of the Resource Management and Conservation Plan. The majority of this land is designated Rural Land which permits a minimum lot size of 20 acres. Property owners are encouraged to cluster the development potential onto areas most suitable for development and to dedicate the remaining areas into open space. A major means of promoting public health and safety is the proposed land capacity ordinance which will establish a density commensurate with site constraints.

Future action will be required once the Alquist-Priolo Special Study Zones are delineated by the State Geologist. These zones define areas that straddle potentially active faults. When the information becomes available, the County shall consider adopting a geologic hazard overlay zone. Properties within this zone would be subject to additional site investigation and development standards aimed at insuring public health and safety in the event of a seismic event. Zoning shall also be reviewed to determine whether critical facilities (hospitals, police stations, fire stations, and other emergency response facilities), high occupancy buildings (theaters, auditoriums, stadiums, etc.) or very high residential development are inappropriately permitted within the Special Study Zone.

In addition, properties located within 2000 feet of known hazardous waste properties shall be zoned to exclude residential, educational, and health care facilities.

Specific and detailed criteria should be adopted in accordance with Alquist-Priolo Act and the State Mining and Geology Board recommendations.

FINANCING PROGRAMS - MULTIPURPOSE

The following funding programs are potential sources that may be utilized to carry out recommended actions in the Plan. The particular program can be used as a guide to the types of money available. However, the programs may change from year to year, as may the commitment to funding. Thus, this section of the Plan should be reviewed regularly--at least once a year, so that an updated appraisal of implementing methods is maintained. Before describing the various funds, it is important to realize that since 1978, two constitutional amendments have shifted local reliance from taxes to exaction, fees, and assessments. Proposition 13 limited local property taxes to 1 percent of the 1975-76 market value of the property and requires two-thirds vote of the electorate in order to levy new special taxes. Because the County can no longer raise the ad valorem property tax in order to generate revenues for general government purposes, for all intents

and purposes, Proposition 13 has eliminated this traditional source of financing. Proposition 4, passed in 1979, prohibited most public agencies' annual appropriations from exceeding the prior year's level, except for adjustments based on changes in population and the consumer price index. Proposition 4 exempts from an agency's appropriation limits regulatory fees and user charges which cover only the cost of services, and therefore provides an incentive for local government to turn to these methods of financing.

General Funds

The County could appropriate monies from its general fund for a variety of activities, including provision of bicycle trails and street improvements. However, there are certain serious shortcomings to utilizing these funds for large-scale projects. In general, the amount available for such projects is limited. In addition, the use of the small amounts of funds that are generally available necessitates an incremental approach to improvements which is often impractical from an economic standpoint. Therefore in most instances, the use of General Funds will have to be combined with some type of special purpose funding, which will be related to specific programs.

General Obligation Bonds

General obligation bonds can be used for a variety of purposes including municipal improvements and acquisition of open space and recreation lands. A major drawback at present is the requirement that the issuance must comply with constitutional debt limitation requirements, which prohibit a community from incurring a debt in any year greater than revenues projected for that year. To exceed that debt limit requires two-thirds voter approval and creation of an annual tax sufficient to service the bond.

Dedications and Exactions

The California Subdivision Map Act allows local jurisdictions to collect fees from developers to cover the costs of major thoroughfares, bridges, drainage, sewer and groundwater recharge facilities (Government Code Sections 66483-66484.5). It also allows the County to require a subdivider to install improvements with capacity in excess of that required for the proposed subdivision and requires that, in such cases, the local agency reimburse the developer for that portion of the cost in excess of that required for the improvements to serve the subdivision. To repay the above reimbursement cost, the County may levy a charge for use of the improvements, levy a charge against the real property benefitting from the improvements and/or establish a local benefit district to collect such charges (Government Code Sections 66485-66487).

Local governments have also required developers to provide land or public facilities such as parks, schools, and recreational facilities or to pay for the provision of such facilities according to standards outlined in an adopted recreation element. However, there are limitations on the imposition of in-lieu fees including the need for an expressed or implied authorization for

the item to be funded by the fee; the need, usually, for an implementing ordinance; and the need for the fee to bear a reasonable relationship to the project being approved. Furthermore, there is legal uncertainty whether certain fees are or are not "special taxes" under the meaning of Proposition 13. If they are interpreted to be "special taxes," then they cannot be imposed without two-thirds approval by the electorate. The County should, therefore, consult its own Counsel when considering the use of fees.

Special Benefit Assessment

California law authorizes a variety of assessment procedures which can be employed to finance improvements in specific areas. These assessment procedures have been used historically to finance construction of roads, sidewalks, bridges or grade-separated crossings, flood protection facilities, storm drainage facilities, and open space. More recently they have been used for downtown malls, parking structures and transit. They can also be used to provide maintenance services or other specialized services. Unlike the reimbursement districts available under the Subdivision Map Act, assessment districts can apply in existing as well as new areas.

Assessment district procedures provide an equitable way of assigning costs because they operate directly on benefitted properties and are based on property value or the amount of benefit received. With the passage of Proposition 13 the use of assessment procedures has special relevance in an industrial and commercial area since many recent fiscal analyses have concluded that residential properties are, or will be, paying an increasing portion of the tax burden.

The procedures for establishing assessment districts vary substantially depending on the enabling legislation. In some instances, the legislative body can establish the district, in other instances approval by registered voters in the area is needed, while in still other instances approval by a majority of property owners is mandated. Thus the potential application of assessment procedures depends on the initiation and formation procedures required and by attitudes toward mandatory participation. A summation is provided below of the more relevant assessment procedures. These are discussed by the type of improvement or service financed by the procedure.

Drainage and Sewer Facilities. Government Code Sections 66410-66499.30 and the Subdivision Map Act (Government Code Sections 66483-66484.5) authorize payment of fees to defray the costs of building drainage facilities for the removal of surface and stormwaters from local and neighborhood drainage areas. To enact fees, an ordinance requiring payment of fees must be in effect for a period of at least 30 days prior to the filing of a tentative map (or parcel map if no tentative map is required). The ordinance refers to a drainage or sanitary sewer area which contains an estimate of the total costs of constructing the local drainage or sanitary sewer facilities required in the plan. The governing body is the legislative body that has adopted the drainage or sanitary sewer plan.

The cost to be imposed, whether actual or estimated, is based upon the findings of the legislative body that subdivision and development of property within the planned drainage or local sanitary sewer area will require construction of the facilities described in the plan.

Open Space. An Open Space Maintenance District is authorized in Sections 50575-50620 of the Government Code. The district may employ necessary labor and provide the required materials and equipment to maintain and to operate planned open space and recreation areas. Formation may be initiated by petition of at least 25 percent of the landowners in the proposed district. Alternatively, if the legislative body determines that the district is in the public interest, it may adopt an ordinance of intention, with protest by more than 50 percent of the landowners terminating the proceedings. The legislative body must have complete charge, supervision, and control of all open areas maintained. The body may appoint an advisory board composed of five property owners within the district. Advisory board members serve without compensation for three years terms and may make recommendations to the legislative body with respect to maintenance and operation of open areas.

Bridges and Major Thoroughfares. Section 66484 of the Government Code enables the County to adopt an ordinance that may require the payment of a fee as a condition of approval of a final map or as a condition of issuing a building permit for the construction of bridges or major thoroughfares. A local ordinance must refer to the Circulation Element of the General Plan and to the provisions of such element which identify those major thoroughfares whose primary purpose is to carry through traffic and to provide a network connecting the state highway system. If one-half of the owners within the area of benefit protests the improvement, then proceedings are abandoned. The local ordinances may require the payment of a fee as a condition of approval of a final map or as a condition of issuing a building permit. An ordinance adopted pursuant to this section may provide for the acceptance of considerations in-lieu of the payment of fees. The agency imposing fees may incur an interest-bearing indebtedness for the construction of bridge facilities for major thoroughfares.

Streets and Highways. Section 22585-22594 of the Streets and Highway Code allows the legislative body to construct or install improvements and to provide for the maintenance or servicing of those improvements. The assessment district is initiated by legislative resolution. Proceedings for the assessment may be abandoned if there is a majority protest of property owners owning more than 50 percent of the area of assessable lands within the proposed district. A four-fifths vote of all legislative body members can overrule the protest.

Other Improvements. Special Municipal Tax Districts are authorized under Sections 60000-60160 of the Government Code. The district created can maintain and operate any public improvement or utility of local necessity or convenience, furnish or perform any special local service including music, recreation, or advertising. The governing body may appoint officers and employees for the district as it deems necessary. Officers and employees serve at the pleasure of the legislative body and are not subject to civil service provisions. Formation is initiated by a petition of residents living within the proposed district. Ten percent of the registered voters within the proposed district must sign the petition. The legislative body adopts a resolution of intention and, if no objections are sustained, submits a proposal to form a district and levy tax to residents of the district. A majority vote in favor of the district allows the legislative body to declare

the district formed and levy the special tax. The district has the authority to levy taxes upon taxable property not to exceed \$1 per year on each \$100 of assessed valuation.

Other Special and Assessment and Bonding Acts

A variety of other assessment district acts exist in California, many of which may be applicable to the County. These include the following: The Improvement Act of 1911, the Municipal Improvement Act of 1913, and the Drainage District Improvement Act of 1919. All of these allow for the issuance of bonds to construct public facilities. The bonds can be against single owners or against a group of owners.

General Revenue Sharing

Authorized by the State and Local Fiscal Assistance Act of 1972, revenue sharing is a federal assistance program designed to redistribute general revenues back to the states and local governments. The monies can then be used for all types of capital outlays or for operating and maintenance expenses in eligible categories called priority expenditures, including public safety, environmental protection, public transportation, health, recreation, libraries, social services for the poor or aged, and financial administration. Although priority expenditures exclude education, cash payments to welfare recipients, and general administration, they are sufficiently broad to allow local governments wide discretion in their disbursement. Under the program, income tax monies received by the Department of the Treasury are allocated back to the States according to one of two allocation formulas. Within each State, similar formulas, are used to determine the cities' and counties' entitlements. Locally, revenue sharing funds are treated as local funds, subject to all laws and procedures applicable to the expenditure of local revenues.

State Community Redevelopment Law

Redevelopment combines police and corporate powers and represents one of the most powerful tools available to the County to implement its General Plan. Where private investors alone are unable or unwilling to assemble land and invest the necessary capital for revitalizing blighted areas, redevelopment is a means of focusing community resources to transform a deteriorating area to more productive use.

In California, the Community Redevelopment Law provides cities and counties the authority to carry out redevelopment projects (Health and Safety Code Sections 33000 et seq.). The County Board of Supervisors must first create the agency, appointing either public members or itself as the agency. The law also permits the County to enter into a joint powers agreement with the cities of Lakeport and Clearlake to create a redevelopment agency.

The Board can designate project areas which exhibit any of a variety of conditions including unfit or unsafe building, neglect by absentee landlords,

underdevelopment, inadequate lot sizes, mixed uses which are obsolete or disfunctional, and lack of adequate public improvements (Health and Safety Code Sections 33031 et seq.). A redevelopment plan for the project must include, among other things plans for streets, buildings, and open space, a statement of the effect of the plan on residents of the area, a description of financing methods, and a plan for participation of affected property owners (Health and Safety Code Sections 33332 et seq.).

Redevelopment agencies implement their plans by acquiring land, managing property, relocating people and businesses, clearing land, preparing sites, building facilities, selling land, and rehabilitating buildings and structures. The law provides that a redevelopment agency may obtain financing from any legal source. Prior to the passage of Proposition 13 in 1978, most redevelopment agencies relied on tax increment financing as their primary source of money. In this method, the assessed value of property in the project area is frozen at the time the project begins. The increased margin, or increment, of tax revenues from subsequent improvements pay the project's costs instead of being turned over to the usual taxing agency (e.g., city, county, special district). This lasts until the project is done and paid for. Because of Proposition 13, however, property is not regularly reassessed and increments of value grow more slowly than before.

As a result, tax increment revenues are much lower than before 1978. In addition, Proposition 4 (passed in 1979) imposed a spending limit on local agencies, thereby possibly restricting the ability of redevelopment agencies to finance their plans without a vote of the electorate. In addition to using tax increment financing, the agency may accept loans or grants from agencies of the federal government, the state government, or any other public agency.

FINANCING PROGRAMS - SPECIFIC PURPOSE

A variety of funding programs exist for specific purposes. Rather than providing a comprehensive inventory of these programs, which are subject to frequent changes anyway, this discussion focuses on certain program areas of particular relevance to the County. These areas include public facilities, community/economic development, and geothermal-related development. The information is only provided to offer suggestions to the County.

Public Services/Facilities

Schools. Since the passage of Proposition 13, school districts in California are restricted from using voter-approved bonds to finance the cost of new school facilities. Other methods are available, however, to accommodate enrollment growth.

The Emergency Classroom Law of 1979 provides that facilities may be leased at a rate of not more than \$2,000 per unit from the State of California. To be eligible for the program the district must furnish evidence to the State Allocation Board that it has no available bond proceeds which could be used for the purpose of classroom facilities.

The school district can also levy developer impact fees on new housing construction. These fees, also called bedroom taxes since they are typically levied on a per-bedroom basis, can be used to provide relocatable classrooms. The fees may not exceed the amount necessary to pay five annual lease payments for interim facilities. In lieu of the payments of fees, the builder may at his/her option and expense provide interim facilities owned or controlled by the builder at a place designated by the school district. At the conclusion of the fifth school year, the builder would remove the interim facilities from the school site.

Development liens are another method for funding school facilities. With this method, the school district would establish a non-profit corporation and lot owners or developers would create an assessment district. Liens would be imposed on lot owners or home purchasers to be used to repay bonds purchased by the non-profit corporation.

A fourth source of financing for local school construction is the State School Facilities Fund. This fund is the most likely source of financing for permanent school facilities. Over \$300 million has been assigned to this fund for the 1980-81 fiscal year. Future levels of funding are likely to fluctuate from year to year.

Transportation. Funds available to implement the actions called for in the transportation discussion are described in the County's Regional Transportation Plan. They are briefly identified here

<u>Program</u>	<u>Funding Source</u>
State Highways	State gasoline and diesel fuel tax revenues
County Roads	Highway Users Taxes, Transportation Development, Federal Aid Secondary, Federal Bridge Replacement and Rehabilitation, Federal Forest Receipts, County General Funds, and Fines.
Transit	Federal Urban Mass Transportation Act of 1964: Section 18 for nonurbanized areas and Section 16(b)(2); State Transportation Development Act: Local Transportation Fund and State Transit Assistance Fund; and Revenue Sharing
Nonmotorized Transportation	Transportation Development Act (SB 325), Bicycle Lane Account, State Highway Account, and Federal-Aid

Wastewater Facilities. The traditional source of funding for publicly-owned treatment works has been the federal Wastewater Treatment Works Construction Grants Program, administered in California by the State Water Resources Control Board. Local projects are eligible for up to 87.5 percent funding of project costs for conventional systems, and 97.5 percent funding for innovative or alternative technology systems.

An alternative funding source that could be potentially useful to the County is the Rural Water and Sewer Grants and Loans offered by the Farmers Home Administration. While the County itself is ineligible, other public entities such as municipalities, special purpose districts or authorities, Indian tribes, and non-profit corporations or cooperatives in areas under 10,000 population may receive monies. Loans and grants may be used to construct, repair, improve, or expand rural water supply and distribution systems. Also eligible are sanitary sewer systems, storm sewer systems, and solid waste disposal facilities.

The County could also consider establishing on-site waste disposal management districts, as provided for by State law (SB 430). Under this legislation, public agencies with current authority to treat and dispose of wastewaters can designate problem zones. Within these problem areas, the public agency would assume responsibility for management and maintenance of the septic systems and assess fees to homeowners to cover the costs.

Community/Economic Development

The following programs are federal programs tailored to stimulate local economies. The County Planning Department should evaluate the County's eligibility for these programs and present to the Board of Supervisors those programs that offer the greatest benefits.

Farmers Home Administration - Community Facilities Loan

Eligibility: Public entities such as municipalities, counties, special purpose districts, and federally recognized Indian tribes; intended for communities under 10,000 population.

Use: Fire stations, libraries, hospitals, clinics, community buildings, industrial parks, and water, sewer, and solid waste disposal systems.

Community Services Administration - Rural Development Loan Fund

Eligibility: Community development corporation, community action agencies, cooperatives, public agencies, community-based organizations, community development credit unions.

Use: Business facilities and community development projects in rural areas aimed at providing increased income, employment, and ownership opportunities for low-income residents.

U.S. Department of Housing and Urban Development - 701 Comprehensive Planning Grants

Eligibility: States, local governments, metropolitan A-95 clearing-houses and Indian tribe bodies.

Use: Fund up to two-thirds the cost of activities to improve government management and decision-making capabilities; supplement local funding for comprehensive planning.

Farmers Home Administration - Rural Planning Grants

Eligibility: State, local governments, areawide comprehensive planning agencies, organizations with authority to prepare comprehensive plans for rural development.

Use: Fund up to 75 percent of the cost of comprehensive planning programs to foster rural community development, especially programs which affect the unemployed, underemployed, low income, and rural minority residents in areas under 10,000 population.

Economic Development Administration - Public Works Grants and Loans

Eligibility: States, local governments, Indian tribes, and nonprofit organizations in EDA - Designated Area or Economic Development District or Center.

Use: Encourage long range gains in jurisdictions where economic growth is lagging or where the economic base is shifting; provides public works and development facilities needed to attract new industry and promote business expansion.

Farmers Home Administration - Industrial Development Grants

Eligibility: Local governments and Indian tribes in areas under 50,000 population.

Use: Facilitate development of business, industry, and related employment for improving the economy in rural areas; finance industrial sites including acquisition and development of land.

Economic Development Administration - Technical Assistance Grants (Title III)

Eligibility: No specific criterion.

Use: Solve problems of economic growth in low income areas through administrative and demonstration project grants, feasibility studies, management and operational assistance, and other studies.

Farmers Home Administration - Business and Industrial Loans

Eligibility: Local governments, profit or non-profit cooperative, corporation, partnership, trust, or Indian tribe in areas under 50,000 population.

Use: Provides guaranteed loans to further business and industrial development for the purpose of upgrading the economic and environmental climate in rural communities.

Department of Labor - Senior Community Service Employment Programs

Eligibility: States, local governments, national public and private non-profit organizations, U.S. territories.

Use: Create and pay for part-time community service job positions for individuals over 55 years old, residents of the state in which the project is operating, capable of performing the tasks involved in community service employment, and low income as defined by the Office of Management and Budget. Typical employment positions are in schools, hospitals, day care centers, etc., or in newly formed or innovative community service projects.

Geothermal Related Activities

Under the provisions of Chapter 6, Section 3800 et seq., of the California Public Resources Code, 40 percent of all money received by the State of California from the federal government for federal geothermal leases must be distributed to those counties from which geothermal lease revenues originated. Lake County's portion of revenues from geothermal wells on federal leaseholds will average \$344,260 per year over the next six years. This 1980 legislation specifically designates the following activities for which these funds may be used:

- resource assessment and exploration technology.
- local and regional planning, and policy development and implementation necessary for compliance with programs required by local, state, or federal laws and regulations.
- identification of feasible measures that will mitigate the adverse impacts of the development of geothermal resources and the adoption of ordinances, regulations and guidelines to implement such measures.
- collection of baseline data and environmental monitoring.
- preparation of or revision of geothermal resource elements, or geothermal components of energy elements, for inclusion in local general plans, zoning and other ordinances, and related planning and environmental documents.
- administrative costs incurred by the local jurisdiction that are attributable to the development or production of geothermal resources.
- monitoring and inspection of geothermal facilities and related activities to assure compliance with applicable laws, regulations, and ordinances.
- identification, research, and implementation of feasible measures that will mitigate the adverse impacts of such development and production.

- planning, construction, provision, operation, and maintenance of those public services and facilities that are necessitated by and result from such development or production.
- undertaking projects demonstrating the technical and economic feasibility of geothermal direct heat and electrical generation applications.
- undertaking projects for the enhancement, restoration or preservation of natural resources, including, but not limited to, water development, water quality improvement, fisheries enhancement, and park and recreation facilities and area.

FURTHER PLANNING

General Plan Review and Amendment Process

The General Plan is a policy document that seeks to direct development over a 20 year time frame. However, assumptions regarding future conditions are based on information on hand today and such information is expected to change with time. Accordingly, if the Plan is to continue as a useful guide, it must be periodically reviewed and updated to reflect new and better information. It must be revised to be responsive to new conditions and new perceptions of the future.

Public input has played a major role in forming this Plan. Continued citizen participation will insure the Plan remains relevant. The County Board of Supervisors may elect any of a number of different approaches, ranging from town meetings, to radio talk shows, to mail-out questionnaires. The Citizens Advisory Committee, which was created to advise on the preparation of the Plan, is familiar with the planning process, and recognizes the need for a more comprehensive, Countywide approach to planning, could continue to serve effectively in monitoring the implementation of the Plan and in educating others.

At a minimum the Plan should be updated every five years. Many conditions can change within that five year time span, so that it is recommended that the County Planning Department monitor growth rates and land consumption on an annual basis both Countywide and within planning areas. The results of this effort will enable the County to adjust growth rates and land use allocations to reflect significant shifts in development. These amendments to the Plan can be taken up during one of the three times each year when a Plan can be amended; provided however, if the proposed amendment relates to the provision of low- and moderate-income housing additional amendments beyond the three may be considered. It is recommended that the Planning Department establish three dates during the year at which time any proposed amendments can be brought before the Planning Commission and Board of Supervisors.

In considering proposals to amend the Plan, the County shall keep in mind that the Plan is a policy document and should not be revised to reflect the personal interests of any one individual or group. Plan amendments should

be in the public interest and supported by the broad consensus. An environmental document, pursuant to the California Environmental Quality Act, must be prepared for Plan Amendments. Thus, the proposed revisions will be evaluated in terms of public support, consistency with the rest of the Plan, and its environmental implications.

Additional Studies

- The policies in the Community Development Plan call for more detailed plans to be prepared for the County's unincorporated communities. These plans should take the form of area plans which can then be adopted as part of the General Plan. The area plans should emphasize the interrelationship of land use and circulation and target areas for housing rehabilitation or preservation.
- Efforts to attract industrial enterprises are made difficult by inadequate transportation access in and out of the County and by the unavailability of public services. Moreover, there is a need to identify what type of industries are more appropriate and beneficial to the County. The policies in the Community Development Plan call for an industrial suitability study to be performed to determine which industries can best take advantage of the County's resources, while enhancing the County's economic base.
- Critical to future development is the assurance that water supplies are available to meet domestic needs and fireflow requirements. However, one of the notable issues raised during the planning process was the uncertainty over the amount of water capable of being extracted from aquifers. Policies in the Resource Management and Conservation Plan recommend that an effort be made to assess the water supply situation and establish a program for the equitable distribution of the resource. Continued coordination with Yolo County is also recommended as a means of achieving greater influence over the County's own water sources. It is proposed that a comprehensive water plan be prepared to first document availability of water resources and second to recommend institutional and financial mechanisms for coordinated development and management of the County's water resources. The management framework should include current water districts, private companies, mutuals, and individuals. The study may be funded from one or a combination of sources including County general funds, flood control districts funds, or federal Clean Drinking Water Act funds.
- More detailed information on the County's demographic and socio-economic characteristics will become available when the final 1980 Census material is released. The County should review that information, and where appropriate, particularly for the Housing Element, revise the General Plan.
- Similarly, the Soil Conservation Service is now in the process of updating its soil classification survey of Lake County. The new information should be used to more carefully define areas suitable for development and areas suitable for agricultural protection.

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